

LEATH & ROSS'S HOMŒOPATHIC PHARMACIES,

9 VERE STREET, W.,
And 5 ST. PAUL'S CHURCHYARD, E.C.,
LONDON.

Those desirous of
BECOMING AGENTS
are requested

ESTABLISHED 1835.

To apply at

9 VERE STREET,
Wholesale Department.

Our Agents'
GLASS-TOP SHOW CASE,
As it appears open.



TRADE PRICE £4 4s.
CONTENTS REALISE £7 1s. 6d.

THE NEW FAMILY CHEST
Contains 28 Bottles of the most
useful Homœopathic Medicines,
a Guide, giving the treatment of
all common complaints, the uses
of the Medicines, proper doses,
&c. In the lid are the two ex-
ternals most in use, viz., Arnica
and Calendula. It can be fitted
to hold either Pilules or Tinctures.
Price 25/; trade price, 16/8.

Agents for L. & R.'s Medicines
are now established in every
town of any importance in
England, some of the principal
towns in Ireland and Scotland,
several of the British Colonies,
and India and America. Up-
wards of 1,800 persons have
accepted the Agency, and many
have found this branch a profit-
able auxiliary to their other
business.

LEATH & ROSS'S WHOLESALE PRICE LIST OF MEDICINES, ETC., PUT UP READY FOR SALE.

LOBULES—Medicated any strength up to the 30th potency.

Sixpenny Tubes, 3/- per dozen.
Ninepenny " 4/6 "
Shilling " 6/- "

TINCTURES—Any strength up to the 30th potency.

Sixpenny Bottles, 3/- per dozen.
Ninepenny " 4/6 "
Shilling " 6/- "

PILULES—Medicated to any strength up to the 30th potency

Sixpenny Bottles, 3/- per dozen.
Ninepenny " 4/6 "
Shilling " 6/- "

TRITURATIONS—

Sixpenny Bottles, 4/- per dozen.
Ninepenny " 4/6 "
Shilling " 6/- "

EXPORT ORDERS ARE DESPATCHED WITH THE GREATEST PROMPTITUDE.
Special quotations for large quantities.

LEATH & ROSS'S PROPRIETARY ARTICLES.

BERBERINE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.
BLUBLAIN LINIMENT, 1/1½, 2/9 ... 9/6, 22/.
PHOSPHO-MUR. QUININE, or PICK-ME-UP
TINCTURE, 1/1½, 2/9 ... 9/6, 22/.

ROSINE, 1/, 1/6, 2/6 ... 8/, 12/, 20/.
ANTISEPTIC TOOTH TINCTURE, 1/, 1/6, 2/6 ... 8/, 12/, 20/.

NEURALINE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.
GLYKALINE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.
ODONTALGIC ESSENCE, 1/1½, 2/9, 4/6 ... 9/6, 22/, 36/.

OZONIZED OIL, 1/, 1/6, 2/6 ... 8/, 12/, 20/.
HAIR RESTORER, 1/6, 2/6, 4/6 ... 12/, 20/, 36/.

Agents' Counter Cases, £2|2|0, £3|3|0, £4|4|0, £6|6|0, and £10|10|0.

LEATH & ROSS, LONDON.

The price of VASELINE is now so low, and its value so universally recognised, that it is coming into general use in Medicine, Pharmacy, and the Arts.

Put up in 1-lb. and 5-lb. tins for dispensing, &c., and in larger packages for manufacturing purposes.

BEWARE OF ALL IMITATIONS—See that OUR NAME and TRADE MARK "VASELINE" IS ON EVERY PACKAGE.

PETROLEUM VASELINE JELLY.

As an emollient, Vaseline is superior to any other substance yet discovered. Its marvellous healing and restoring qualities excel everything else, and it is rapidly taking its place on the toilet table to the exclusion of the various complexion powders, pomades, cosmetics, and other compounds. It will keep the skin clearer, softer, and smoother than any cosmetic ever invented, and will preserve the youthful beauty and freshness of the healthy complexion.

Endorsed by the entire Medical Press of England, France, Germany, America, &c. In general use in Hospitals, and recommended by the most distinguished Physicians, Surgeons, and Chemists throughout the world.

Pamphlets containing these editorials and recommendations post free.

We beg to call attention to the following Net Price List of our Vaseline Preparations:—
FOR MEDICINAL USE.

VASELINE, PURE
CAMPHORATED VASELINE.
CARBOLATED VASELINE.

All in two sizes. Bottles in fancy card cases.
No. 1 size, 1s. each in Boxes (wood) of 1 dozen, 8s. per dozen.
No. 2 size, 2s. each in Boxes (wood) of 1 dozen, 16s. per dozen.

Ditto, ditto, ditto, and in 1-lb. tins.

WHITE VASELINE,
VASELINE CONFECTIONS.

For internal use. Pulmonary and other complaints. In Fancy Tin Box, 8s. per doz.

POMADE VASELINE

FOR TOILET USE.

will make the Hair grow when nothing else will. It keeps the Scalp free from Scurf and Dandruff. Contains no animal matter, and can never become rancid. In 3 sizes. Bottles, in Cardboard Boxes, 8s., 16s., and white in colour, superior Perfumed, glass stoppers, 33s.

VASELINE HAIR TONIC.

A liquid preparation of Petroleum for Ladies' use. Bottles, enclosed in Cardboard Cases, 36s. per dozen.

VASELINE COLD CREAM,

for the Complexion and use after shaving, chafing of infants, &c. Glass Pots, 8s. and 16s. per dozen.

VASELINE CAMPHOR ICE,

for the Lips, Pimples, Blotches. 1 size, 8s. per dozen.

VASELINE TOILET SOAP,

6d. and 1s. Tablets, 4s. per dozen net, and 9s., less 15 per cent. discount.

VASELINE TAR SOAP.

Tablets 1s. each, 9s. per dozen Tablets, less 15 per cent. discount.

VASELINE TOILET SOAP.

Superfine Tablets, 1s. 3d. each, 12s. per dozen, less 15 per cent. discount.

All soaps made, except the above, are derived from coarse animal fats, in many cases rancid, and in all cases liable to become rancid. There can be nothing healing or soothing to the skin in soaps so manufactured, however pleasantly perfumed they may be.

So-called detergent soaps are made in this manner, and flavoured with a strong irritating chemical which injures the skin. Vaseline is used by ALL MEDICAL MEN as the most healing substance known; and made into soap, retains all its virtues. It is the most delicate and elegant Toilet Soap that is made.

FOR THE FARM AND HOUSEHOLD.

Vaseline Harness Paste, Round Tins	...	...	...	1s. 6d. each	...	...	12s. per dozen.
Vaseline Axle Paste	"	...	...	1s. 6d. "	...	...	12s. "
Vaseline Boot Paste	"	...	...	6d. "	...	...	4s. "

VETERINARY VASELINE.

FOR DISEASES IN ANIMALS, LOSS OF HAIR, ETC.

1 lb. Tins	...	...	1s. 6d. each, 12s. per doz.		5 lb. Tins	...	...	6s. each, 4s. per tin.
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Also in larger packages for manufacturing purposes.

This article is also the best anti-corrosive in use for preventing rust in guns, arms of all kinds, household utensils, &c.

Standard Ointments, with Vaseline as a base, can be kept without deterioration until used up.

In 1-lb. jars at 2s. 6d. each.

Price List, with full particulars of Medicinal, Pharmaceutical, and Toilet Preparations of Vaseline, free by post.

MANUFACTURED ONLY BY THE

CHESEBROUGH MANUFACTURING CO.

(NEW YORK),

41 HOLBORN VIADUCT, LONDON, E.C.

REGISTERED.

REGISTERED.

Important Notice to the Wholesale Trade.

J. Hart & Son,

Sponge Importers,

55^a, Houndsditch,

*and at London,
Greece and Turkey.*

We, buying our Sponges direct from the Fishermen, are enabled to offer the finest selection of Honeycomb and Turkey Cups and Solids it is possible to obtain, at prices lower than any other house in the trade.

The Sponges we send out are entirely free from Sand but not washed."

Goods ordered by post can be returned if not approved of.

Two thousand cases to select from.

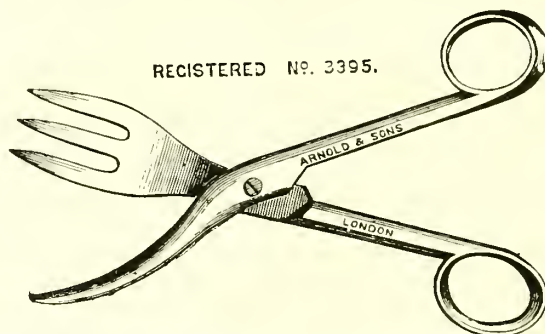
ARNOLD & SONS'

"DESIDERATUM," OR KNIFE & FORK COMBINED.

Suggested by DR. J. C. HOGAN, M.B.

PRICE:

Nickel-plated for
Right or Left
Hand,
15s.



PRICE:

Nickel-plated for
Right or Left
Hand,
15s.

This Instrument supplies a want long felt by those who only have the use of one hand, either from Amputation, Paralysis, Accident, or otherwise.

Extract from THE LANCET, March 12th, 1881 :—"The Instrument of which the enclosed is an illustration (and which I have named 'The Desideratum' for the purpose of registration) was invented by me to obviate as far as possible the awkwardness and inconvenience attendant on the eating of their meals by persons deprived of the use of either arm." Extract from the BRIT. MED. JOURNAL, March 19th, 1881 :—"It is on the principle of the shears being formed of a fork and cutting blade, which enables the person using it to divide at will and raise his or her food." Extract from the MED. PRESS AND CIRCULAR, March 16th, 1881 :—"It can be had to suit either the right or left hand, and with or without an indentation (which acts as a tooth) on the fork edge." Extract from M' D. TIMES AND GAZETTE, March 19th, 1881 :—"Messrs. Arnold & Sons, of West Smithfield, have most intelligently carried out my design."

Sole Manufacturers : ARNOLD & SONS, Instrument Makers,

By Appointment to Her Majesty's Government, St. Bartholomew's Hospital, and the Principal Provincial and Colonial Hospitals, &c.,
35 and 36 WEST SMITHFIELD, LONDON, E.C.

DAVIDSON'S CONCENTRATED SWEET RENNET.

Makes delicious Curds and Whey in ten minutes.

Sold in Bottles, 6d., 1s., and 2s. each.

This is the Best and Cheapest Rennet in the market, and Chemists will consult the interests of their customers by keeping it in stock and recommending it. Will keep good for any length of time and in any climate.

PREPARED ONLY BY
JAMES N. DAVIDSON.
Pharmaceutical and Manufacturing Chemist,
DUNDEE.

Wholesale Agents—Messrs. Maw, Son & Thompson,
London.

Davidson's Cod Liver Oil Emulsions and Concentrated Sweet Rennet are now on view at the International Medical and Sanitary Exhibition, South Kensington.

ORIGINAL PLAISTER WORKS.

Established over 60 Years.

A. DE ST. DALMAS,
40 BELGRAVE GATE, LEICESTER.

MEDICAL PLAISTERS

Of all kinds (Best Quality) for Home and Export.

Porous Plaisters—Yards or Boxes.

Order "ST. DALMAS'S" through Wholesale Houses.
PRICES ON APPLICATION.

IN EUROPE, as in America, the subscriber finds himself obliged to combat imitations of his Syrup of Hypophosphites, and offset the evils of imposture by warning medical men against fraud. From time to time substitutes have appeared, in dress or name closely resembling "Fellows' Hypophosphites," and recommended as "identical with" or "just as good." These, palmed off for a time on the unsuspecting by some Apothecary or Doctor, cause disappointment and frequently endanger life.

To prevent errors, prescriptions should only be entrusted to respectable houses, as no respectable Chemist will make or vend an imitation article. The "trustworthy" only are respectable: he who seeks to profit through the reputation, the industry, or the property of another is not trustworthy; if such be an Apothecary, his drugs, chemicals, medicines, and, above all, his dispensing should not be trusted.

"Fellows' Hypophosphites" was invented by the subscriber, and has been thoroughly tested for over fifteen years. Enormous expenditures and a high character have won for it a world-wide distribution, which it is our determination to maintain by a loyal adherence to characteristic uniformity, care, and fidelity of its manufacture. As large a margin of profit is allowed as is consistent with its costly components, and a liberal spirit is ever extended to the Trade. Yet there are persons calling themselves "brother Chemists" who unflinchingly and impudently copy our prescription, and advertise it as their property, thus sacrificing their respectability in the hope of obtaining more profit, while their product falls far short of the original.

The names of these persons are withheld for the present, in the hope that no further exposure will be necessary. Imposition may be effectually prevented by ordering the Syrup in the original bottle.

JAMES I. FELLOWS, Snow Hill, LONDON.

P.S.—SAFEGUARDS AGAINST SUBSTITUTION.—The Fellows' Hypophosphites is dispensed in ½-lb. and 1-lb. bottles—the address Fellows & Co., St. John, N.B., blown on—the name J. I. Fellows, St. John, N.B., in watermark upon the wrapper; it is hermetically corked, and sealed with crimson gelatine, and covered by a metallic capsule; is heavy, slightly alkaline, pleasantly bitter taste, and deposits a flocculent brown precipitate of Hypophosphite of Manganese when left undisturbed for forty-eight hours. NOTE.—Though this precipitate mars the appearance, its presence has been found imperative to its full remedial effect.

PRIZE MEDAL,



LONDON, 1862.

NOTICE TO THE TRADE.

JUNE, 1881.

PRIZE MEDAL,



PHILADELPHIA, 1876.

LOW'S FLOWER EXTRACTS, &c.,

ARE NOW REDUCED IN PRICE, AS BELOW:—

	per lb.		per lb.		per lb.
Ext. Cassie	9/6	Ext. Rezeda	9/6	Ext. Tubereuse	9/6
„ Jasmin	9/6	„ Rondeletia	8/-	„ Violet	15/-
„ Jonquil	9/6	„ Rose	9/6	„ Verbena	8/-
„ Lily of the Valley ...	9/6	„ Rose Geranium ...	9/6	„ White Rose	10/6
„ Magnolia	9/6	„ Spring Flowers ...	9/6	„ White Lilac	9/6
„ Orange Flower	9/6	„ Stephanotis	9/6	„ Wood Violet	13/6
„ Patchouli	9/6	„ Sweet Briar	9/6	„ Wild Rose	9/6
„ Queen of the Alps ...	9/6	„ Tea Rose	9/6	„ Ylang Ylang	9/6

These Extracts have always had the highest reputation; they are all of our own manufacture, are guaranteed **pure**, and of **triple strength**, and will compare favourably with any in the Trade.

N.B.—Owing to the failure of the **VIOLET** crop in 1880, however, this Extract is advanced in price, and will probably remain high for some time. Purchasers are warned against the spurious Ext. Violets already in the market.

LOW'S COMPOUND PERFUMES,

For Dilution by the Trade, are the Strongest in the Market, viz.:—

ESS. BOUQUET, JOCKEY CLUB, & FRANGIPANNI.

Price 14/- per lb.; or 13/- in Winchester Quarts.

LOW'S NURSERY SOAP.

This Soap is the result of considerable study and many experiments, the object desired being to produce a **soap** that would be **quite neutral**, and thus innocuous to the most tender skin, yet one that would lather freely, and not waste quickly away.

Price 33/- per Gross; or 11/- per doz. Boxes of 4 Tablets.

FAMILY BROWN WINDSOR SOAP,

At 60/- per cwt., Genuine, and Sweetly Perfumed.

This Soap is recommended to the Trade as the best value that can be obtained. Embossed Squares, 6 to lb., and in 14-lb Boxes.

Discount, 10 per Cent. Cash at a Month, or 5 per Cent. payable on Journey.

R. LOW, SON & HAYDON,

Perfumers, Toilet Soap Makers, and Brush Manufacturers,

330 STRAND (OPPOSITE SOMERSET HOUSE) LONDON.

MELBOURNE EXHIBITION,
1880-1.

CORBYN, STACEY

PEPSIN-ESSENZ—LIEBREICH.

"We have ascertained clinically that a teaspoonful of this very light and palatable preparation, taken, according to direction, after food, has a considerable power of aiding imperfect and diseased digestion."—*British Medical Journal*.

"Since the appearance of an article by Dr. LIEBREICH, in the *Practitioner*, on the action of Pepsin, attention has again been drawn to that preparation. All that can be said on the subject of the various kinds of Pepsin in circulation is what has been frequently repeated, namely, that in the beginning dry preparations act quite well, but that they do not keep for any length of time. The researches of Panum and Preyer have shown that of the various solutions the best is the Pepsin-Essenz of OSCAR LIEBREICH."—*British Medical Journal*.

"Dr. LIEBREICH's Pepsin-Essenz is agreeable to look at and pleasant to the taste, and in some cases in which we have employed it the result has been highly satisfactory. We think it well worthy the attention of the profession."—*Medical Times and Gazette*.

"It possesses to a considerable degree the power of coagulating milk, and it may therefore be advantageous in the dyspepsia of infants."—*Practitioner*.

In Original Bottles at 2/6 each; 20/- per dozen.

Sole Agents—Corbyn, Stacey & Company.

CALAMINA PREPARATA, CORBYN.

A Natural Calamine, prepared from ore selected and imported by CORBYN & CO.

Of this Calamine Dr. TILBURY FOX says that "it is excellent in every respect." **5/- per Pound.**
The *Lancet* says it is "an excellent preparation of Calamine, very fine in powder, soft and free from grit."

CORBYN'S EXTRACT OF MALT.

RICE OXLEY, Esq., M.R.C.S., House Physician to the Radcliffe Infirmary, says: "We frequently employ your Extract of Malt in this Institution. Where Cod Liver Oil cannot be taken it acts as a very efficient substitute. It is besides so agreeable that I have never known a single patient object to take it. I consider it a most useful article, and have seen it do much good in many cases of debility and convalescence."

Dr. WM. ROBERTS, at the Northwich Meeting of the British Medical Association, reported favourably on the activity of CORBYN & Co.'s Extract of Malt.

CORBYN & CO. prepare this Extract in VACUO, at a temperature so low that the full proportion of *Diastase* is retained and the characteristic flavour is unimpaired. It is nourishing, and rich in both fat and flesh formers, and may be had associated with such remedies as Iron, Quinine, the Hypophosphites, Cod Liver Oil, &c.

Bottles, 2/- each; 16/- dozen.

COMPOUND EUCALYPTUS LOZENGES.

(TROCH. EUCALYPTI CO.)

The basis of these Lozenges is the well-known astringent Red Gum of Eucalyptus Rostrata. Mr. Lennox Browne, in "Practical Remarks on Throat and Ear Diseases," says:—"If the fauces are relaxed, the Compound Eucalyptus Lozenges made for me by Messrs. Corbyn are indicated. These Lozenges, containing chlorate of potash and cubebs, with fruit paste in addition to the astringent element, do not produce dryness as do the purely astringent ones, but simultaneously relieve the relaxation and the dryness, and also assist expectoration."

They are specially serviceable in all cases of congestion and relaxation of the pharynx and larynx, particularly when accompanied by arrest of mucous secretion. As voice lozenges they are probably unequalled.

See "Medical Hints on the Production and Management of the Singing Voice," by Lennox Browne, Esq., F.R.C.S., Senior Surgeon to the Central London Throat and Ear Hospital; Surgeon and Aural Surgeon to the Royal Society of Musicians, &c.

Each Lozenge bears the Stamp—C. E.

In Bottles, 2/- each; 16/- dozen.

Shippers supplied.]

WHOLESALE AND EXPORT DRUGGISTS

C., S. & Co.'s Prices Current, and "Notes on Drugs, &c.,"

AND COMPANY

AWARD,
FIRST ORDER OF MERIT.

CHAULMOOGRA OIL

(OLEUM GYNOCARDIÆ), expressed from the seeds of GYNOCARDIA ODORATA, R.Br.

This Oil is an official remedy in India for Leprosy, Scrofula, Skin Diseases, and Rheumatism—see *Pharmacopœia of India*, p. 26, where it is also stated that the Oil procured from the Bazaar is usually impure.

PERLES.

OINTMENT.

SOAP.

The dose of the Oil is from four to sixteen minims, or from one to four Perles.

For varied information, see a Pamphlet entitled "Papers on the Plant *Gynocardia odorata*, &c.," by R. C. LEPAGE, Esq., late of Calcutta, post free, One Shilling. On pp. 11 to 17 will be found particulars of remarkable cases of Leprosy, Scrofula, and Secondary Syphilis successfully treated by Dr. MOUTAT.

JAMES STARTIN, Esq., Surgeon to St. John's Hospital for Skin Diseases, writes:—

"I have given your Chaulmoogra Oil Soap a good trial, and have much pleasure in informing you that it has a very good effect upon many skin eruptions, especially those of a scaly nature, and is invaluable in the treatment of Eczema and Psoriasis of the palms of the hands. I shall not fail to recommend it."

The Pure Oil in 2/6 and 4/6 Bottles, 20/-, 36/- per doz.; ½-lb. Bottle (10/6), 6/6; 1-lb. Bottle (20/-), 12/- each. Perles, 2/- Boxes, 16/- per doz.; 5/- Bottle of 100, 3/4; 22/6 Bottle of 500, 15/-; 40/- Bottle of 1,000, 28/- each.

Ointment, 2-oz. Pot (1/9), 14/-; 4-oz. Pot (3/-), 24/-; 1-lb. Pot (10/6), 78/- per doz.

Soap in Tablets (1/-), 8/- per doz.

EXT. COLOC. CO. CORBYN

This well-known Extract possesses the confidence of the Medical Profession to an extent which is not approached by any similar preparation. Its distinguishing characteristics are uniformity, certainty, and efficiency of action, coupled with freedom from the unpleasant griping effects which so often accompany the operation of the Official Extract even when most carefully made.

EXT. COLOC. CO. CORBYN, in ¼-lb., ½-lb., and 1-lb. Jars, 24/6 per lb.

PULV. EXT. CO. COLOC. CORBYN, in ¼-lb., ½-lb., and 1-lb. Jars, 26/6 per lb.

[REGISTERED.]

LIQUOR OPII DIALYSATUS.

Liquor Opii Dialysatus is a preparation of Opium, obtained, as its name implies, by Dialysis. It contains all the crystalline active principles of Opium in the same relative proportions as the crude drug. The proportion of morphia, and of the opium alkaloids generally, is constant—that of the former being equal to four grains of Morphia Hydrochlorate in the fluid ounce. In continued use it has been found that this preparation does not produce *constipation, headache, or stomach disturbance*, and patients exhibit a tolerance not shown to any other preparation of Opium.

In Bottles—4 oz., 8 oz., and 16 oz.—at 7/- per lb.

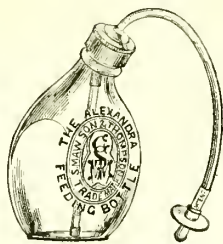
300 HIGH HOLBORN, LONDON.

[Shippers supplied.]

will be forwarded on application accompanied by Business Card.

S. MAW, SON & THOMPSON'S

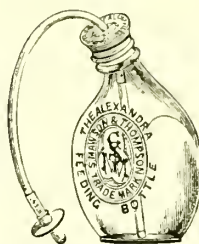
FEEDING BOTTLES.



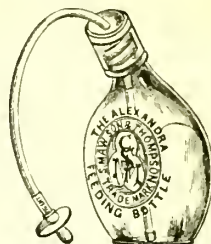
Alexandra Feeding Bottle,
Screw Metal Caps,
11/ per doz.



Alexandra Feeding Bottle,
Gilt Porcelain Cap,
20/ per doz.



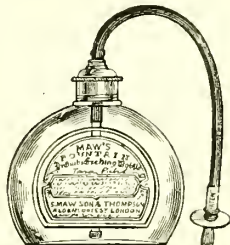
Alexandra Feeding Bottle,
Earthenware Cap,
10/ per doz.



Alexandra Feeding Bottle,
Screw Glass Stopper,
10/3 per doz.



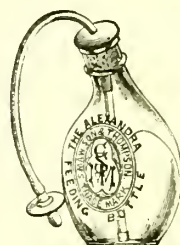
Alexandra Feeding Bottle,
Earthenware Cap,
7/6 per doz.



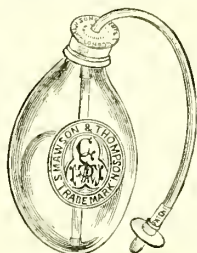
Fountain Feeding Bottle,
Pure Tin Mount,
20/ per doz.



Fountain Feeding Bottle,
Pure Tin Mount,
12/ per doz.



Alexandra Feeding Bottle,
Wood-Top Cork,
3/9 per doz.



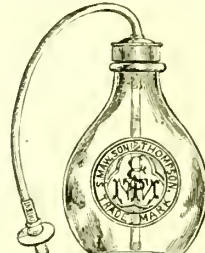
Oval Feeding Bottle,
Earthenware Cap,
7/6 per doz.



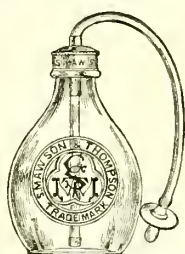
Export Feeding Bottle,
Earthenware Cap,
7/3 per doz.



Export Feeding Bottle,
Screw Glass Stopper,
7/6 per doz.



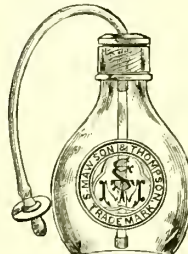
Export Feeding Bottle,
Screw Metal Cap,
8/6 per doz.



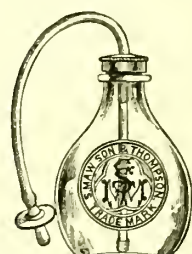
Export Feeding Bottle,
Metal Cap,
4/3 per doz.



Export Feeding Bottle,
Wood-Top Cork,
3/6 per doz.



Export Feeding Bottle,
Screw Glass Stopper,
4/3 per doz.



Export Feeding Bottle,
Screw Metal Cap,
4/6 per doz.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

FOR FURTHER PARTICULARS SEE QUARTERLY PRICE CURRENT, PAGES 53, 54.

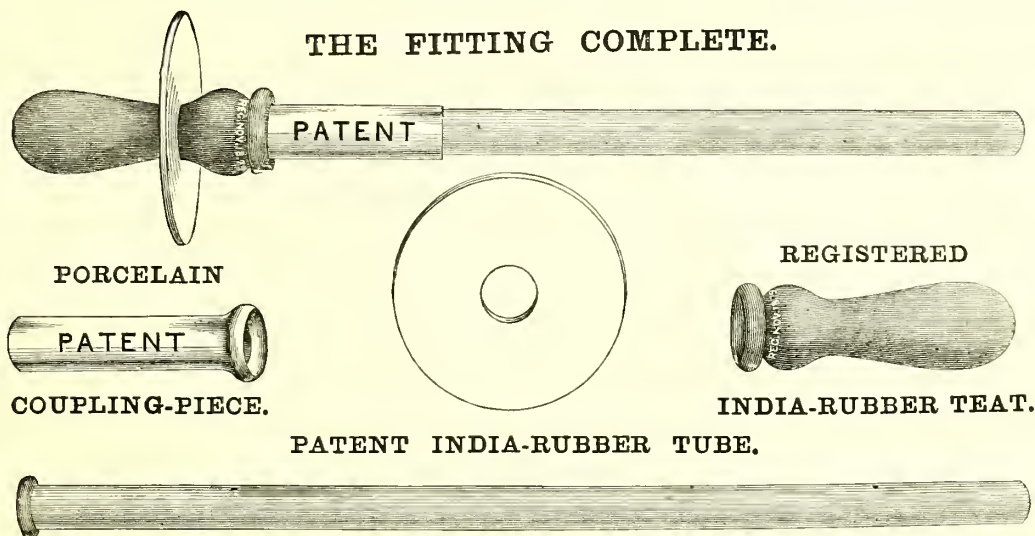
S. MAW, SON & THOMPSON,

7 to 12 Aldersgate Street, London.

S. MAW, SON & THOMPSON'S IMPROVEMENT IN FEEDING BOTTLES.

Patented in England, December 4, 1879;
Patented in the United States, April 27, 1880.

THE FITTING COMPLETE.



Patent India-rubber Tubes, in $\frac{1}{2}$ gross and 1 gross Boxes—

9 inch White per gross, 10/6	9 inch Black per gross, 15/-
10 " " super 16/	10 " " " " " " 16/-

Registered India-rubber Teats, in 1 doz. Boxes—

2 Sizes (Small and Medium), per gross, White, 8/ & 14/; Black, 12/ & 21/-

Patent Coupling-pieces, in 3 doz. Boxes per gross, 8/-

S. MAW, SON & THOMPSON beg to inform the Trade that in future all their Feeding Bottles, except Sixpenny, will be fitted with the above **PATENTED IMPROVEMENT**, unless ordered to the contrary.

The improvement consists in the introduction of the New Registered Teat, and in the construction of the Coupling-piece, the latter **passing over** the **exterior** of the India-rubber Tube, by which arrangement injurious contraction is avoided, and the cleaning of the Tube facilitated, a Tube Brush being easily passed through without the removal of the Coupling-piece.

In the fitting-up of ordinary Feeding Bottles, the Shield fixes the Teat upon the Union Joint, preventing its easy removal, and making it difficult to replace the Teat in its air-tight position, without which the action of no Feeding Bottle is perfect. The New Registered Teat is so formed as to receive the Shield and retain it in position without connection with the Coupling-piece, the Teat thus being easily removed and replaced without damage.

SPECIAL QUOTATIONS TO WHOLESALE BUYERS.

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MAWER'S TARAXACUM OR DANDELION COFFEE,



Prepared from the Fresh Root,

IN TINS, 6d., 9d., 1s., 1s. 6d., and 2s.,
Is by far the best in the market. Excellent in quality, neatly packed, cheap
and economical, and a very saleable article. Beware of worthless imitations.

See Analytical Report on every packet by Professor Attfield, F.R.S., &c.,
Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain.

A LARGE BUYER writes:—"Our customers ask for Mawer's
Taraxacum, and will have no other, and we are doing well with it."

A NOBLE EARL, the oldest in the House of Peers, sends the following
message:—"Present my compliments to Mr. Mawer, and tell him I
like his Taraxacum, and that it agrees with me very well; and request him
to send the usual number of tins."

Terms and Price Lists on application to the Manufacturer—

EDWARD MAWER,
Chemist,
HIGH WYCOMBE, BUCKS.

Handbills and Show Cards supplied gratis.

LAMPLOUGH'S EFFERVESCENT PYRETIC SALINE.



HAVE IT IN YOUR HOUSES AND TRAVELS, USING NO OTHER SALINE;
it gives instant relief in Headaches, Sea or Bilious Sickness, and quickly cures the worst form of Eruptive
or Skin Complaints. The various diseases arising from Constipation, the Liver, or Blood Impurities, Inoculation,
the results of breathing air infected with Fevers, Measles, or Smallpox, are frequently prevented and
certainly cured by its use.

The sale of these Saline Salts having greatly increased during the past few years, I beg most cordially to
thank those who sell and recommend the same, and also to inform intending dealers that they will find Messrs.
BARCLAY, EDWARDS, MAW, NEWBURY, SANGER, SUTTON, and the Wholesale Houses generally, ready to supply
their wants. This Advertisement is found needful in consequence of the trouble, cost, and inconvenience in the
keeping and collection of numerous small accounts. *Note.*—The Name, Trade Mark, Labels, Wrappers, &c., are
all Registered and Entered at Stationers' Hall.

113 HOLBORN HILL, LONDON, E.C.

SPECIAL NOTICE.—Medical Gentlemen having fever cases, and desirous of trying the Saline, can have a single bottle at wholesale prices
by sending their cards.



WRIGHT'S GINGER BEER POWDER.

IN THREEPENNY PACKETS ONLY.

Acknowledged by every one to be the Cheapest and Best in the Market. "Prime Pop" or Small Beer made with greatest ease.
No straining required. Order a sample card of 1 dozen from your agent. Sure to Sell. Price, 24/ per gross, less discount.

Sole Proprietor—J. W. WRIGHT, Chemist, BURNLEY.

AGENTS—Hovendens'; Bourne & Taylor; Evans, Lescher, London. Evans, Sons & Co.; Jackson, Liverpool.

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THE "UNIVERSAL" KNEADING AND MIXING MACHINE.

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Write for New Lists. Great Improvements. Perfection achieved.

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BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR
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FICTITIOUS ADDRESSES.

ROWLAND'S TOILET ARTICLES,

20 Hatton Garden, London,

Have been known for the last 80 years all over the world, and being well advertised, and always finding a ready sale, are well worthy the attention of Chemists, Druggists, and Storekeepers.



ROWLAND'S MACASSAR OIL

Is universally held in high repute for its unprecedented success during the last 80 years in promoting the growth, restoring, improving, and beautifying the human hair. It prevents hair from falling off or turning gray, strengthens weak hair, cleanses it from scurf and dandruff, and makes it beautifully soft, pliable, and glossy. For children it is especially recommended, as forming the basis of a beautiful head of hair, while its introduction into the nursery of Royalty is a sufficient proof of its merits. Sizes, 3s. 6d., 7s., 10s. 6d. (equal to four small), and 21s. per bottle.



ROWLAND'S KALYDOR

Is a most refreshing preparation for the Complexion, dispelling the cloud of languor and relaxation, allaying all heat and irritability, and immediately affording the pleasant sensation attending restored elasticity and healthful state of the skin. Freckles, Tan, Spots, Pimples, Flashes, and Discoloration fly before its application, and give place to delicate clearness, with the glow of beauty and of bloom. In cases of sunburn, or stings of insects, its virtues have long been acknowledged. Price 4s. 6d. and 8s. 6d. per bottle.

ROWLAND'S ODONTO

Or PEARL DENTIFRICE is of inestimable value in preserving and beautifying the teeth, strengthening the gums, and giving a pleasant fragrance to the breath; it eradicates tartar from the teeth, prevents and arrests decay, and polishes and preserves the enamel, to which it imparts a pearl-like whiteness. Its unprecedented success for more than half a century shows the universal favour in which it is held, while the fact of its being entirely free from any acid or mineral ingredients constitutes it the safest and purest tooth powder ever used.

ROWLAND'S EUKONIA

Is a new and fragrant Toilet Powder, specially recommended to ladies. Each box has inside the lid a certificate of purity from Dr. REDWOOD, Ph.D., F.C.S. 2s. 6d. per box.

IMPORTANT CAUTION.—To protect the public from fraud, ALL ROWLAND'S ARTICLES have on the WRAPPER their SIGNATURE, "A. ROWLAND & SONS," in red ink; the genuine Kalydor has a 6d. Government stamp across the stopper, and the genuine Odonto a 3d. Government stamp across the box. Buy only ROWLAND'S articles, of 20 HATTON GARDEN, LONDON.

COUNTER BILLS, SHOW CARDS, &c., CAN ALWAYS BE HAD ON APPLICATION.

THE NEW SEAMLESS TIN BOXES

In Crystallised, Decorated, or Plain Tin Plates, suitable for Blacking, Polishing Paste, Tooth Powder, Plate Powder, Pomade, Lozenges, &c., &c.

SPICE AND BISCUIT BOXES, COFFEE, MUSTARD, AND POWDER CANISTERS,
LIQUID PAINT TINS, &c.

C. SMITH & SONS, ARUNDEL WORKS, SHEFFIELD.

SILVER MEDAL,

THE

GOLD MEDAL,



PARIS, 1878.

Tin-Plate Decorating Co.,

MANUFACTURERS OF THE NEW

CRYSTALLIZED TIN BOXES,

FOR TOILET AND OTHER PURPOSES.



SYDNEY, 1879.

SEAMLESS DECORATED TIN BOXES,

Suitable for Blacking, Polishing Paste, Tooth Powder, Pomade, Pills, Lozenges, &c.

DECORATED TIN CANISTERS,

For Disinfectant Powder, Baking Powder, &c., &c., &c.

WORKS: NEATH, SOUTH WALES.

DRUGS, CHEMICALS & PHARMACEUTICAL PREPARATIONS.

OLDFIELD, PATTINSON & CO.,

Late WILLIAM MATHER,

WHOLESALE AND EXPORT DRUGGISTS,

AND

**MANUFACTURING CHEMISTS,
37 Long Millgate, MANCHESTER.****SPECIALITIES:***Concentrated Infusions and Decoctions, Soluble Essences, Liquors, Extracts, &c.***IMPORTERS OF DALMATIAN INSECT FLOWERS AND POWDER.**

Large Buyers are requested to write for quotations.

PRICE LISTS MAY BE HAD ON RECEIPT OF BUSINESS CARD.**THE UNIVERSAL TOOTHACHE SYRINGE**Retail,
6d. each.Wholesale,
4s. per dozen.

Is a great improvement upon the "DENTAL SYRINGE," as the fluid is contained in a glass bulb, which enables its contents to be seen, also prevents the liability to evaporation through long keeping or exposure.

THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—Both the above are exempt from Stamp Duty by permission of the Board of Inland Revenue.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopœia, and free from all Chemical impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the United States Pharmacopœia.

	Per lb.		Per lb.		Per lb.		Per lb.
Aqua Anethi, Concent.	4/0	Aqua Cinnam. Ver. Concent.	6/0	Aqua Fœniculi, Concent.	4/0	Aqua Pimentæ, Concent.	4/0
" Anisi, "	4/0	" Cassiæ "	4/0	" Menth Pip. "	4/0	" Rosæ "	8/6
" Camphoræ "	4/0	" Flor. Aurant. "	8/6	" Ang. Con. 6/0	" "	" Rosæ Virgin "	10/6
" Carui "	4/0	" Flor. Sambuci "	8/6	" Virid. "	4/0		

The above are put up in Bottles of 1lb. or 1lb. and upwards, each of which has the Inventor's Protection Label over cork. Wholesale Agents—Hearon & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Raimel Liverpool; Woolley, Manchester; Bewley & Draper, Hunt & Co., Dublin; Glasgow Apothecaries' Co., Hatrick & Co., York. Special terms for large quantities may be had from

B. ROBINSON, Operative Chemist, Distiller and Brewer of British Wines, Manchester.**BURROUGH'S****SPIRITUS RECTIFICATUS, P.B.****SPIRITS OF WINE** **CHEMICALLY PURE.**

The Best English Grain Spirit, Free from Fusel Oil.

56 over proof, 20s. per gallon; 60 over proof, 20s. 6d. per gallon; less 5d. per gallon for five gallons. Lower quotations for quantities. Cash on delivery or with order. Country Orders must contain remittance or reference to London House.

CALE STREET DISTILLERY, LONDON, S.W.

Also Duty Free for Exportation. Best Methylated Spirits at Lowest Prices.

**HUNT'S
PAPER****BOTTLE
CAPS.**Are Reduced in Price to
1s. PER GROSS
The First Five Sizes.Stamping Name and Address 6d. per Gross
extra, as usual.

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TRADE MARK

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SURGICAL BANDAGE MANUFACTURERS,

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Sole Agents for the following Specialities:—

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NIOBIC CORN PENCIL,

Best known remedy for Corns and Warts, 6d.

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WATERPROOF BLACKING,

Unequalled for imparting a permanent brilliancy without brushing.

For Boots, Shoes, Leggings, Belts, Bags, Harness, American Cloth, &c., &c.

Price, 6s. per dozen. Special price for quantities.

DIAMOND MANILLA

TOILET PAPER,

In packets containing 500 sheets, 6d.

"EUREKA" CHEST EXPANDER

AND
BACK SUPPORTER.



Perfectly adjustable in every part, by means of vertical and lateral lacing, and readily gives to every motion of the body, while affording great support and giving a graceful and erect carriage to the head and shoulders.

Very cool and comfortable. Being made of thin material, does not show through the dress of the wearer.

Specially recommended to all young growing girls, machinists, literary ladies, and all whose occupation is sedentary, or of a nature to induce stooping habits.

THE LONDON MEDICAL RECORD of Oct. 15th, 1880, says: "The 'Eureka' Chest Expander is a simple but effective arrangement for keeping the shoulders in their place, and preventing the unhealthy and unsightly habit of stooping. The form of the Expander fitted with Plates is the one most to be recommended in anything like confirmed cases of stooping, or for fully developed ladies, the lighter kind being for young girls and children."

PRICES (each): 4s. 6d. to 7s. 6d., Retail.

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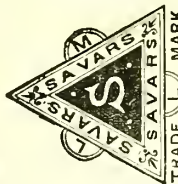
HARVEY, SHEPHERD & CO'S SPECIALITIES.

SOLE EXPORT AGENTS FOR

WILLIAM MATHER, MANCHESTER.



SAVAR'S PROPRIETARY SPECIALITIES.



SAVAR'S ANIMAL SOAP (NON-POISONOUS).—For Washing Dogs and other Domestic Animals. 6d. Packets; 8s. 9d. doz.

SAVAR'S BREAST EXHAUSTERS.—Fitted with the Latest Improvements. 1s. each; 7s. 6d. and 8s. 6d. per doz.

SAVAR'S CAMPHOR CASSETS.—Prevent Infection and relieve Catarrh. 6d. and 9d. each; 3s. 6d. and 6s. per dozen.

SAVAR'S CARBOLIC ACID SOAP.—For Domestic Use. Superior quality (containing 8 per cent. of Acid). 6d. per lb.; 4s. 6d. per dozen. Toilet 4d. Tablets; 2s. 9d. per dozen.

SAVAR'S CHEST PROTECTORS.—Manufactured from best materials. 1s. to 5s. each; 7s. to 45s. per dozen.

SAVAR'S COAL TAR SOAP.—Prepared from an Original Formula; a most elegant and agreeable Toilet Disinfectant. In Tablets, 4d. and 6d. each; 2s. 9d. and 3s. 9d. per dozen.

SAVAR'S COLD CREAM.—Delicately Perfumed with Otto of Roses. Pots, 6d. and 1s. each; 3s. 9d. and 7s. per dozen.

SAVAR'S CORN AND BUNION PLASTERS.—Best White Felt. 6d. Boxes, 2s. 3d., 2s. 10d., 2s. 8d., and 3s. 6d. per dozen Boxes; and in bulk, 1s. 8d. to 5s. 6d. per gross.

SAVAR'S FEEDING BOTTLES.

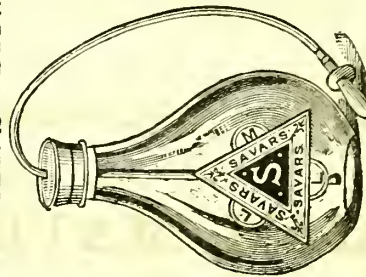


FIG. 2.

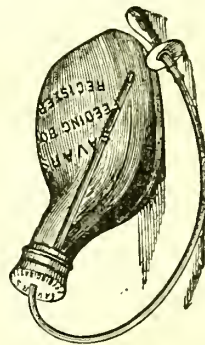


FIG. 1.

These Feeding Bottles are fitted with the best quality of Materials, and are acknowledged by all to be superior to any others offered at the same prices.

May be had either as FIG. 1 or FIG. 2, fitted with White India-rubber Tubing and Teats, or with Native Black India-rubber Tubing and Teats.

Retail, 6d., 1s., and 2s. each; 3s. 6d., 4s., 7s. 6d., 8s. 6d., and 17s. per dozen.

SAVAR'S FLORAL POMADES.—Handsomely labelled. In 1s. and 6d. Bottles; 8s. and 4s. per dozen.

SAVAR'S FLY PAPERS.—For the Destruction of all kinds of Insects. The Cheapest and most Effectual made. 15s. per 1,000.

SAVAR'S FOSSILINE CORN PLASTERS.—Easily applied. Superior to any others. Boxes, 1s. each; 8s. per dozen.

SAVAR'S FOSSILINE PLASTER.—Highly recommended by the Medical Faculty as superior to other Plasters. Boxes, 9d. each; 6s. per dozen.

SAVAR'S FOSSILINE POMADE.—Prevents the Hair Falling Off. The most Economical Pomade. Bottles, 1s. and 6d. each; 8s. and 4s. per dozen.

SAVAR'S FOSSILINE TOILET SOAP.—Highly Emollient. 6d. Tablets, 1s. 6d. and 5s. Boxes; 4s., 13s., and 48s. per dozen.

SAVAR'S "GOOD SAMARITAN" PATENT POROUS PLASTERS.—Adhere readily, and are manufactured from the best materials—free from India-rubber. BELLADONNA, CAPSICUM, or STRENGTHENING, 4d. each; Belladonna and Capsicum, 27s., Strengthening, 24s. per gross.

SAVAR'S "GOOD SAMARITAN" PROTECTORS (NEW SHAPE).—Effectually Cover Chest and Back. 2s. 6d. to 7s. 6d. each; 21s. to 69s. per dozen.

SAVAR'S PERFUMERY.—The most lasting and agreeable. 6d. and 1s. Bottles; 4s., 8s., and 8s. 6d. per dozen.

SAVAR'S POROUS MARGINAL PLASTERS, ON LEATHER.—BALSAMIC, BELLADONNA, CAPSICUM, ROBORANS, &c., all shapes, far superior to any other kind of Marginal Plaster.

SAVAR'S TOILET SOAPS.—Brown Windsor, Castile, Curd, Glycerine, Honey, Oatmeal, Transparent Glycerine, &c., delicately Perfumed. In 2d., 3d., 4d., and 6d. Tablets, 1s. Bars, and 1s. Boxes.

SAVAR'S VIOLET POWDER.—Deliciously Perfumed Starch Powder only. 3-lb. and 1-lb. Packets, 1s. per lb.

The Trade are solicited to state distinctly when ordering that SAVAR'S Articles are required, and are cautioned that each Article is protected with the Trade Mark as above.

Less Ten per cent. Discount, Three Months' Current Accounts. Special Discount to Large Buyers.

A COMPLETE PRICE CURRENT OF DRUGGISTS' SUNDRIES, PROPRIETARY ARTICLES, PATENT MEDICINES, &c., SUPPLIED ON APPLICATION.

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**IMPORTANT TO CHEMISTS, MINERAL WATER MANUFACTURERS,
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**THE THIRD ANNUAL
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OF MACHINERY, UTENSILS, &c.,

USED IN THE

BREWING & ALLIED TRADES,

INCLUDING ALL THE APPLIANCES USED IN THE PREPARATION OF

MINERAL AND AERATED WATERS,

MEDICATED BEVERAGES,

and FANCY DRINKS,

TOGETHER WITH

TASTING STALLS

FOR SAMPLING EVERY DESCRIPTION OF THE ABOVE,

WILL BE HELD AT THE

AGRICULTURAL HALL, LONDON,

ON THE

17th, 18th, 19th, 20th, 21st, and 22nd October, 1881.

NOTA BENE.—Readers of THE CHEMIST AND DRUGGIST will kindly *note the above dates*, to avoid disappointment; the great reputation of the NATIONAL EXHIBITION AND MARKET (now visited annually by upwards of 50,000 traders) having, as is usual in such cases, stimulated attempts at imitation.

The NATIONAL EXHIBITION OF 1880 was by far the largest and best attended *purely Trade* Show ever held in this country, while that of next October bids fair to eclipse all its predecessors.

Space being limited, intending Exhibitors should lose no time in applying for particulars to

ROBERT DALE,

Secretary and Manager, Agricultural Hall, London, N.

OFFICES: 29 BARFORD STREET (adjoining the Hall).



*NO CHEMIST OR DRUGGIST
in the United Kingdom or the Colonies, or
throughout the Indian Empire, would fail to
lay in a Stock of*

GLACIALINE

*if he once used it in his own Household, and
so realised its invaluable property of preventing
putrefaction and fermentative change in liquids
and solid foods.*

**Try it on MILK and
BUTTER to begin with,
and you will never be
without GLACIALINE.**

TESTIMONIALS from all parts of the world, and from all Classes, including Nobility, Gentry, Clergy, Medical and Scientific Men, Business Men, &c., will be found in the Pamphlets, which will be forwarded on request.

GLACIALINE is sold in Elegant Canisters at 2s. 3d.; in 9-oz. Packets at 2s.

Sole Manufacturers and Patentees of GLACIALINE,

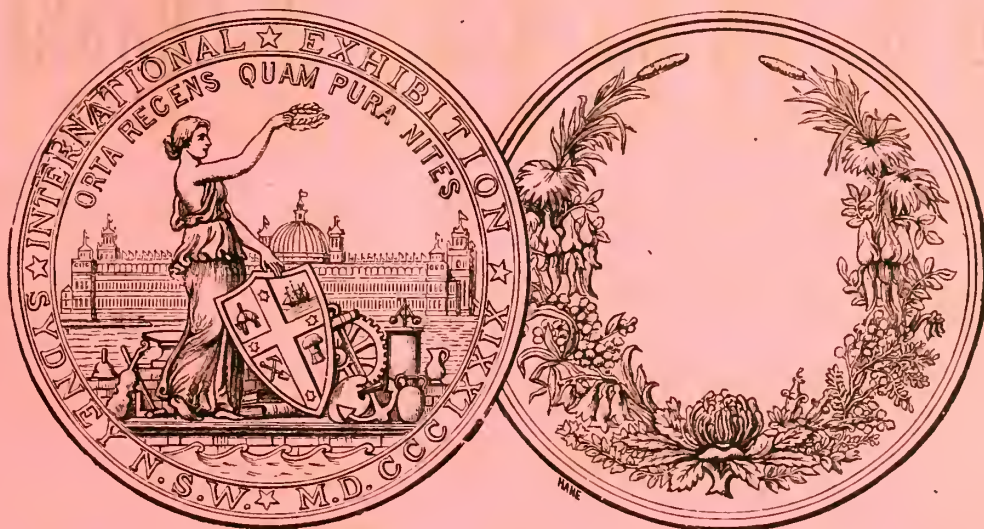
THE ANTITROPIC COMPANY,

126 Renfield St., GLASGOW; and 20 Stamford St., Blackfriars, LONDON.

SYDNEY EXHIBITION, 1879.

We have pleasure to inform our friends that we are
this day in receipt of a

BRONZE MEDAL



AND

DIPLOMA OF HONOUR

FOR OUR

DRUGGISTS' SUNDRIES

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SURGICAL INSTRUMENTS,

SHOWN AT THE ABOVE EXHIBITION.

LYNCH & CO.,

ALDERSGATE ST., LONDON, E.C.

JUNE 21, 1881.

"THE PERFECTION OF PILL MAKING."

FIRST AWARD,

HIGHEST AWARD—SILVER MEDAL,

FIRST AWARD—SILVER MEDAL,



Sydney, New South Wales, 1879.



Paris Exposition, 1878.



Melbourne, 1881.

W. H. Schieffelin & Co.'s SOLUBLE COATED PILLS AND GRANULES,

UNEQUALLED FOR

Purity in Composition, Solubility in Coating,

Uniformity in Size, Perfection in Form and Finish.

THE unparalleled success of our Soluble Coated Pills and Granules in America has induced us to offer them now for the first time to the Physicians and Pharmacists of Great Britain, who are respectfully invited to examine and try them, and to compare them with any other Coated Pills on the market. They are acknowledged to be among the finest specimens of elegant Pharmacy, and have successfully competed with all other kinds of Coated Pills.

We desire to call the attention of Physicians and others to the following points :

1. The best materials are used in their manufacture.
2. The Pills are Coated while soft.
3. The Coating is quickly and perfectly soluble, and there is no sub-coating of any kind.
4. The Coating is so thin that the Pills are not perceptibly increased in size, and yet entirely protects them, and effectually covers any nauseous taste.
5. The Coating is so transparent as to clearly reveal the colour of the mass, and its solubility is not impaired by age.
6. The mass is worked to the highest possible degree of uniform intermixture, and subdivided with scrupulous exactness.
7. Vegetable or organic matters are not charred, nor are volatile principles lost by the use of heat at any time throughout the process of manufacture.
8. The excipients are specially adapted to the permanent solubility of the mass and its efficient therapeutic action.

Particular attention is called to our Granules of Morphine, Strychnine, Arsenious Acid, Aconitine, Hyoscyamine, and other powerful remedies. The desirability of having these medicines accurately subdivided and ready for dispensing will be recognized.

Our List of Pills and Granules includes several hundred of the officinal and standard drugs, chemicals, and pharmaceutical preparations, including the Pills of the British Pharmacopoeia, Quinine, Podophyllin, &c.

HIGHEST AWARD, PARIS, 1878; SYDNEY, 1879; MELBOURNE, 1881.

These Pills and Granules as seen in the International Medical and Sanitary Exhibition, 1881, at South Kensington, can be obtained through Mr. Oscar Oldberg, Phar. D., and Mr. John Gellatly, representing us at the Exhibition, who will furnish lists, prices, samples, and information.

W. H. Schieffelin & Co.,

IMPORT & EXPORT DRUGGISTS, and MANUFACTURING CHEMISTS & PHARMACISTS,

NEW YORK, U.S.A.

ESTABLISHED 1794.

E. CRAWSHAW & CO.

CRAWSHAW'S INK POWDER.

By the use of this Powder a beautiful Black Ink may be manufactured in from ten to fifteen minutes by the simple addition of water, which will be found equal to the best Ink made, while the saving in the cost of bottles and carriage will be found very considerable.

SOMETHING NEW.

1d. Packets, mounted on $\frac{1}{2}$ Gross Cards...	7/- per gross
3d. Packets, mounted on $\frac{1}{4}$ Gross Cards	21/- per gross
6d. Packets, in 1 Dozen Boxes	4/- per doz.
1/- Packets, in 1 Dozen Boxes	8/- per doz.
2/- Tins	16/- per doz.
5/- Tins	40/- per doz.
25/- Tins	19/- each.

The larger sizes are well adapted for those dealers who sell Ink on draught, and will be found much cheaper and better than Ink bought in the usual way.

CRAWSHAW'S PERFECT BLACK DYE.

Will dye a beautiful and fast black at one operation.

6d. Perfect Black Dye, in $\frac{1}{4}$ Gross Wood Boxes...48/- Gross

3d. Perfect Black Dye, in $\frac{1}{4}$ Gross Wood Boxes...21/- Gross

CRAWSHAW'S DYES, ALL COLOURS.

These Dyes, which have now been before the Trade for some years, and which were the first introduced in the form of Powder, have been so successful that there is now scarcely a town in the civilised world where they are not sold. They are six times as cheap as the Liquid Dyes, and anyone can use them.

6d. Dyes (14 to doz.), in $\frac{1}{2}$ Gross Counter Cases...	48/- Gross
6d. Dyes (14 to doz.), in 1 Dozen Boxes.....	48/- Gross
3d. Dyes, on $\frac{1}{2}$ Gross Cards	21/- Gross
3d. Dyes, in $\frac{1}{2}$ Gross Boxes	21/- Gross
2d. Dyes, on $\frac{1}{2}$ Gross Cards	14/- Gross
2d. Dyes, in $\frac{1}{2}$ Gross Boxes	14/- Gross
1d. Dyes, in 3 Gross Counter Case, with Glass Lid	7/- Gross
1d. Dyes, on $\frac{1}{2}$ Gross Cards	7/- Gross
1d. Dyes, in $\frac{1}{2}$ Gross Boxes	7/- Gross

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Manufactured only by

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80 FANN STREET, ALDERSGATE STREET,
LONDON, E.C.

Literary and Scientific.

WORKS BY DR. DOBELL,

Consulting Physician (late Senior Physician) to the Royal Hospital for Diseases of the Chest, &c.

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ON Loss of Weight, Blood-Spitting, and LUNG DISEASE. To which is now added Part VI., on the FUNCTIONS and DISORDERS of the LIVER, and their Management in accordance with the Results of Modern Discovery.

Affections of the Heart and in its Neighbourhood. Cases, Aphorisms, and Commentaries. Illustrated. Second issue.

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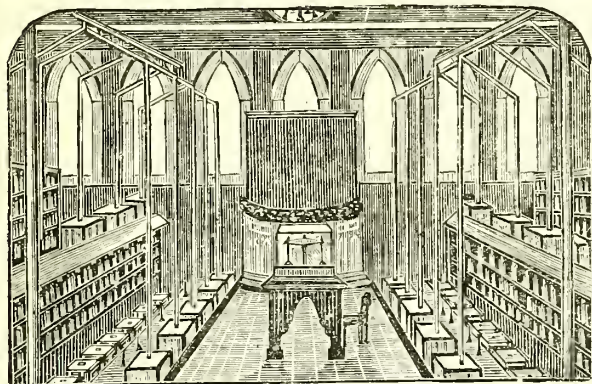
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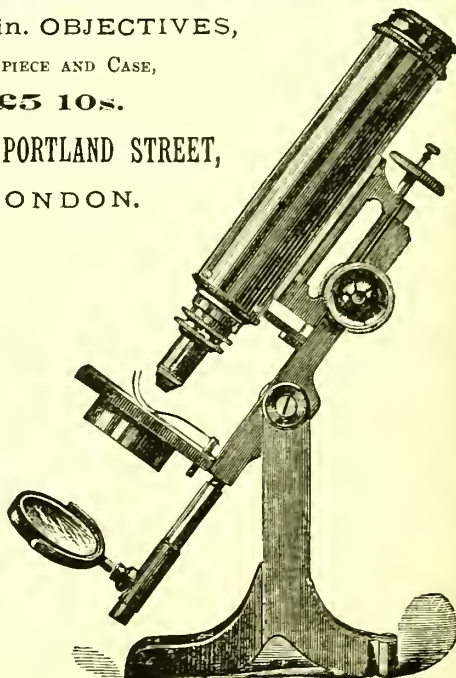
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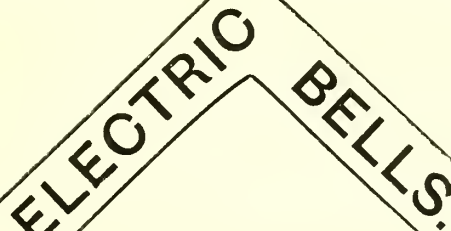
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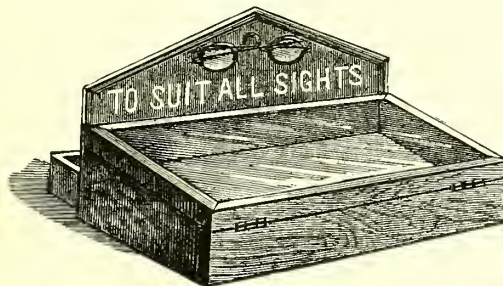
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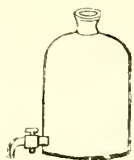
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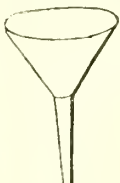
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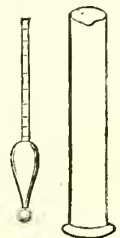
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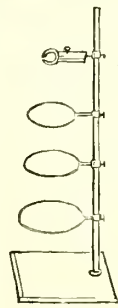
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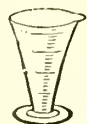
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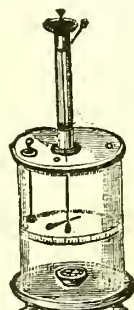
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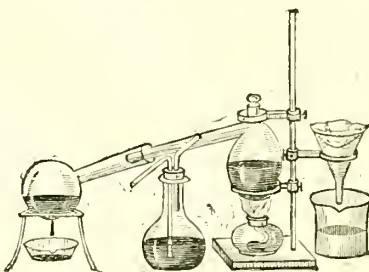
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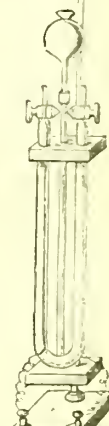
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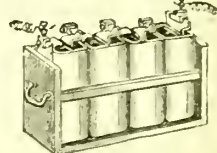
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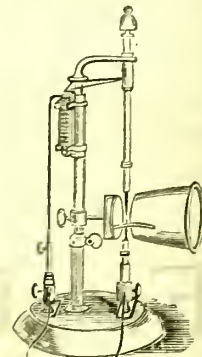
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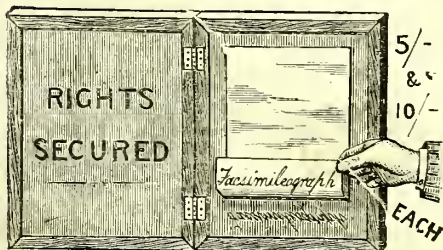
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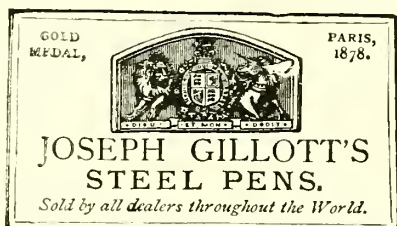
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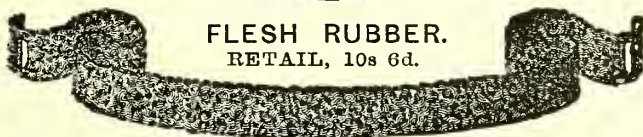
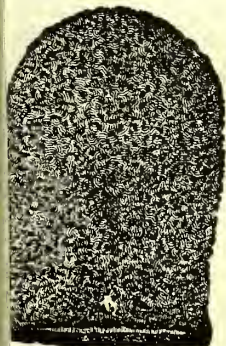
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RETAIL, 2s. & 3s. each.

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INDIA RUBBER FLESH GLOVE AND RUBBER.

This is an ENTIRELY NEW APPLICATION OF INDIA RUBBER, and lovers of the Bath pronounce them

THE ONLY EFFICIENT FLESH GLOVE AND RUBBER.

Being always absolutely Rough in hot or cold water, they are altogether unique. They cannot scratch the body, and produce a fine lather with Soap. They are manufactured from Pure India Rubber (the properties of which are peculiarly cleansing and genial to the skin), and retain their strength for many years.

Wholesale of Druggists' Sundriesmen, Perfumers, &c.

I. LIVERMORE, Patentee.

FAC-SIMILE OF LABEL

IN COVERED JARS.



BURNT-IN LABELS.

Price to the Trade, 12s. per dozen. Usual Discount.

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Changes Grey or Faded Hair to any shade of Black or Brown by a perfectly natural and healthy process, and gives to the Hair a permanent colour which will not wash out.

It is perfectly harmless and free from smell. It renders the Hair silken and glossy without the aid of grease, promotes a luxuriant growth, and prevents baldness.

PRICE 2s. 6d.; or sent free, packed secure from observation, with printed directions for use, for 4d. extra.

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Restores Grey or Faded Hair to its original colour, or any shade of colour that may be desired, without trouble, inconvenience, or expense, and is the best and cheapest, having been in use and given the greatest satisfaction for upwards of 60 years. It nourishes, preserves, and beautifies the hair, prevents its falling out, and gives an appearance of youth to persons however advanced in years. This celebrated preparation, the only perfect one of the kind, was for 55 years sold at half-a-guinea, but now by an improved process of manufacture (owing to the advance of chemical knowledge) is vended at 3s. 6d. Hundreds of Testimonials and 26 Prize Medals.

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IT MAY BE ORDERED OF ANY WHOLESALE HOUSE IN THE TRADE.

GREENSILL'S FAR-FAMED MONA BOUQUET

THE ORIGINAL AND ONLY GENUINE.

The great popularity of this exquisite Perfume is a proof of its excellence and superior qualities.

T. S. GREENSILL, Chemist, Douglas, Isle of Man,
Inventor, Proprietor, and Maker.

AGENTS—LONDON: Sanger; Maw; Edwards; Newbery; Mather; Barclay; Whittaker & Grossmith; Hovenden; Parton & Osborne; Butler & Crispe; Tidman & Son; Barron & Squire; Wright, Layman & Umney; Jno. Thompson; Burgoyne, Burbridge & Co.; Grimwade, Ridley & Co.; Raiss Brothers. LIVERPOOL: Evans, Sons & Co.; Clay, Dod & Case; B. Sumner & Co.; Rimes & Co. MANCHESTER: J. Woolley; Lynch & Bateman; Jewsbury & Brown; Mather. EDINBURGH: Duncan & Flockhart. DUBLIN: McMaster; Hodgson. YORK: Sutcliffe & Headley; Clark, Bleasdale. THIRSK: Wm. Foggitt. BRISTOL: Ferris & Co. LEEDS: Goodhall & Backhouse. BIRMINGHAM: Churchill & Son; P. Harris & Co.; Parton & Osborne; Southall Bros. & Barclay.

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Introduced in 1852.

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Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

OKELL'S ORIGINAL MONA BOUQUET

Retail, 1/, 1/9, and 3/6; Wholesale, 9/, 15/, and 30/ per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for WHOLESALE Agencies to be made to the SOLE CONSIGNEE, THOMAS WEST, Chemist, Stretford, Manchester.

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DEPÔTS IN ALL THE PRINCIPAL CITIES OF THE WORLD

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Jasmin
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Lilac
Rezeda
Geranium
Stephanotis
Orange Blossom
Patchouly
Tuberose
Hyacinth
Kiss me Quick

Gardenia
Doing the Block
Ace of Hearts
Last Kiss
No one to Love
Right Bower
Lavender
Virgin's Bower
First Love
Kiss Me if you Dare
Think of Me
Kiss Me Sweetly
Piesse's Posy
Mizpah

Be Mine
Kiss Me, Love, again
Never Forgotten
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Spring Flowers
Millefleurs
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AND A THOUSAND OTHERS

RIBBON OF BRUGES—for sweet fumigation

ALPACA POMADE—in half-pound jars

PESTACHIO NUT TOILET POWDER.—Brownness of the Neck or Arms, undue Redness of the Face and Hands, are obviated by one application of this exquisite discovery. It represses the unpleasantness of sensible perspiration and its disagreeable accompaniments

INK SOLVENT—removes Ink or Iron mould from paper, linen, or the skin, by merely wetting the stains with the solvent

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COLOGNE DENTIFRICE—prepared from the flowers from which EAU DE COLOGNE is distilled

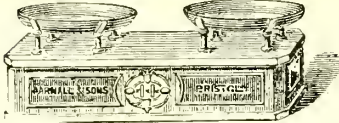
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For Home, Foreign, and Colonial Markets.
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BY HER MAJESTY'S ROYAL LETTERS PATENT.
PROTECTED IN GREAT BRITAIN, FRANCE, AND BELGIUM.

Under our recently Patented Improvements these Balances are now manufactured with Agate Bearings in place of Steel. Being incorrodible they are not affected by acids, and are far more durable and turn much finer.

Made in all sizes and varieties from 2 lb. to 60 lb., suitable for all trade purposes.

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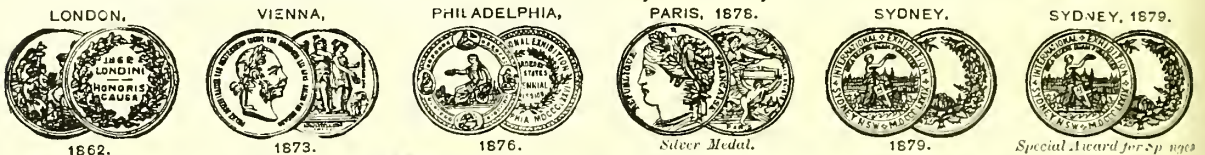
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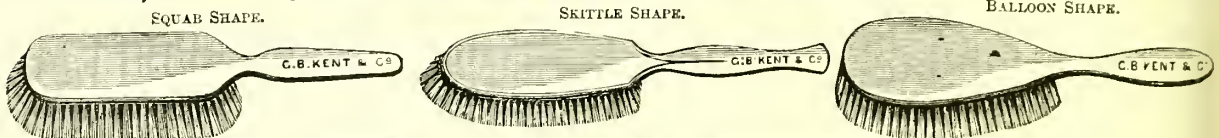
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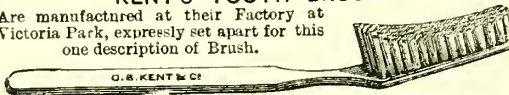
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BALLOON SHAPE.



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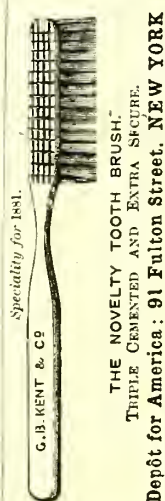
Are manufactured at their Factory at
Victoria Park, expressly set apart for this
one description of Brush.



			Price per doz.
First Quality	G.B. Kent & Co.	London	6/6
Second Quality	Imperial	Quality	5/0
Third Quality	WARRANTED	LONDON	4/0
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Badger Hair Tooth Brushes .. 4/6 6/0 8/0 11/0 per doz.
Children's " .. 3/0 3/6 4/0 ..
Tooth Brush Guards .. Metal, 3/3 Porcelain, 4/6 ..
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KENT'S CLOTH BRUSHES in WOOD or IVORY.
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KENT'S FLESH BRUSHES, Handled or Webbed.
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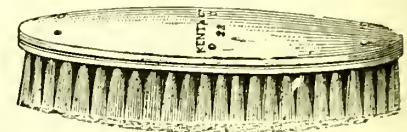


THE NOVELTY TOOTH BRUSH.
TRIPLE CEMENTED AND EXTRA SECURE.
Depôt for America: 91 Fulton Street, NEW YORK

KENT'S NAIL BRUSHES.



Bent Back ..	4/0	7/0	8/6	12/6	12/0	14/6
Round End ..	4/0	7/0	8/6	11/0	13/0	15/0
Roached Grooved ..	19/0	24/0	28/0	32/6	36/0	40/0



No. 22/0	22	23	24
8/6	13/0	17/6	22/0

Handled Nail Brushes .. 4/0 4/6 7/0 8/0 10/6 12/0 16/0 per doz.
Wood .. Trepanned 12/0 16/0 18/0 21/0 24/0 27/0 ..
" Fibre 21/0 27/0 30/0 36/0 42/0 48/0 54/0 per gra.

KENT'S FITTED LEATHER CASES of various descriptions.
KENT'S HAND MIRRORS in Wood and Ivory.
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KENT'S "NOVELTY" TOOTH BRUSH GUARD.
(Tel scope pattern, silver-plated)

G. B. KENT & SONS' Illustrated Price List will be forwarded by post on application.

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Bath Gloves, Rubbers, &c.

	Gloves.	Straps.	Pads.		Gloves.	Straps.	Pads.
CALEFACIO OR BADEN, No. 1, soft Brown . . . per doz.	6/4	10/8	6/0	HONEYCOMB, White. per doz.	5/4	10/8	5/6
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TURKISH THIN WHITE GLOVES, per doz.	4/-			PADS, per doz.	4/-		
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WATERPROOF CHECK OR CAMBRIC SPONGE BAGS.

No. 1	2	3	4	5	6
7×6	8×7	9×8	10×9	11×10	12×11 in.
7s. 6d.	9s.	10s. 6d.	12s. 6d.	14s. 6d.	16s. 6d. per doz.

For other descriptions, see Quarterly Price Current, pages 76 and 77.

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WATERPROOF BATHING CAPS.

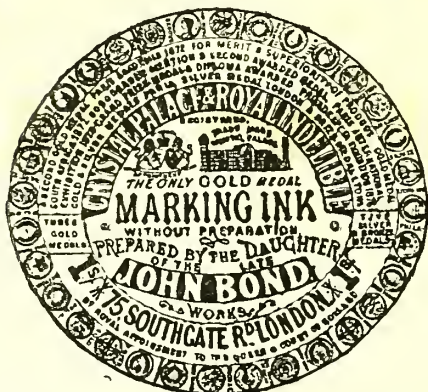
CHECK or CAMBRIC, assorted sizes..	per doz.	12s. 6d.
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" " Circular, two sizes, per doz. ..	14s. & 16s. 6d.	
OILED SILK, three sizes ..	per doz. ..	12s., 14s. & 15s.
" " Circular, two sizes ..	"	16s. & 20s.

For other descriptions, see Quarterly Price Current, page 41.

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With every HALF DOZEN of



BOND'S CRYSTAL PALACE GOLD MEDAL MARKING INK

(Prepared by the Daughter of the Late John Bond),

A Handsome GOLD Show Card or Transparent Lid Box.

MY WHOLESALE TRADE TERMS ARE—

30/ Gross for 6d. Plain; 60/ Gross for 1/ Plain; 36/ Gross for 6d. Pedestals;
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Order at once on the New Show Card, which is portable, and so constructed that it can be either suspended in the Window or used as a Counter Card. Quite a Novelty.

FIRST AWARD MELBOURNE INTERNATIONAL EXHIBITION, 1881.

This makes Three Grand Awards (Sydney, Queensland, and Melbourne) in One Year.

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JAMES'S HERBAL OINTMENT, for the Cure of Pimples, Black Specks, Blotches, &c., and taking away Tan Freckles, Sunburn, &c. Sold by all Chemists, 1/1½ and 2/9 per box.

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For the instant removal of Superfluous Hair. Sold by all Chemists, 1/- per box.

JAMES'S HERBAL POMADE,

For Promoting the Growth of the Hair, Whiskers, Beard, Moustachios, Eyebrows, and Eyelashes. Sold by all Chemists, 1/- and 2/- per box.

These Articles are well worthy the attention of Chemists, Wholesale Houses, and others, as they are being well advertised.

A PERFECT BOON TO MOTHERS!

ROGERS' "NURSERY"

HAIR LOTION.

One application is guaranteed to destroy all Nits and Parasites in Children's Heads, and immediately allay the Itching and Irritation.

It is now used in Thousands of Families with the greatest success, and all who have tried it are delighted with the effect, and declare it to be worth A GUINEA A BOTTLE.

PREPARED ONLY BY

WILLIAM ROGERS,
CHEMIST,

BEN JONSON ROAD, STEPNEY, E.

Sold in large Bottles, price ONE SHILLING. Sample Bottle, 7d.

SOLD BY ALL CHEMISTS AND PERFUMERS.

Observe! Genuine only in Yellow Wrapper, White Label.
WHOLESALE AGENTS.—Barclay & Son; Edwards & Son; Maw, S. & Thompson; Millard & Son; Sanger & Sons; Thompson, 121 New North Road; Butler & Crispe, Cheapside; Hovenden & Sons, City Road.

ANTITARTAR

For Cleaning, Preserving, and Beautifying Artificial Teeth and Plates.

This Preparation acquires a ready sale, as Chemists are continually asked, "What shall I use for cleaning my artificial teeth?" Plates that have become corroded and discoloured in the mouth are speedily restored to their former brilliancy and polish.

Sold in neat Tin Boxes, Retail 2/- each; Wholesale Price, 18/- per dozen.

SOLE PROPRIETOR AND MANUFACTURER—

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Bills, with Name and Address, may be had on application.

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The Bottles well filled, the Article well got up, and the Quality guaranteed.

6d.	Size in 1 dozen Boxes	...	...	...	3s. 0d. per dozen.
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2s. 6d.	„ in Leather Cases	...	...	...	18s. 0d. „

10 per cent. off Invoice, and 5 per cent. Cash Monthly.

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THE MOST PERFECT

MARKING INK,

For Writing or Stamping on Linen, Cotton,
Silk, &c.

BAINBRIDGE & POUND

Strongly recommend this Ink to the Trade generally for its Permanency and Indestructibility; it requires no heat, flows freely from the pen, does not blot or run, and cannot be removed without destroying the fabric.

Sold in Bottles, 6d., 1s., 2s. 6d., 4s. 6d., 7s. 6d., & 12s. 6d. each, by all Chemists and Medicine Vendors.

WHOLESALE DEPÔT—

60 LEATHER LANE, LONDON.

A Liberal Discount to Large Buyers and Shippers.

EWENS' CLARIFIED LARD, MARROW, SUETS, AND OILS.

JAMES EWEN & Sons are induced to give further publicity to these articles, the continued demand by all who have used them being satisfactory proof "that where purity of basis" in ointments, &c., is required, they are most desirable.

By their method of purifying, the fats are not chemically altered, but simply divested of all particles tending to decomposition, they are consequently available for the most delicate preparations.

Adeps. Benz. B. P. and Pharm. Lard (*vide* P. J. Vol. I. No. 8). Direct, "for Cash only," from

JAMES EWEN & SONS' CLARIFIED FAT WORKS,
5 HATFIELD STREET, STAMFORD STREET, S.E.;

Or through any of the Wholesale Houses, with their usual credit, at a small advance.

CAUTION.—See that each package bears their label with name and weight.

TRADE

FOSSILINE

MARK.

A bland, odourless, perfectly pure Hydro-Carbon Jelly, of greater smoothness, firmer consistency, and better appearance than any other Petroleum Jelly.

As a **REMEDIAL AGENT** the properties of **FOSSILINE** are not to be excelled. Physicians have found it invaluable as a basis for Ointments, &c., and as a vehicle for employing the most prized and potent medicines. It is now used in the leading Hospitals in Europe and Canada. It CANNOT GO RANCID, and as an **EMOLLIENT** it is undoubtedly the best yet discovered, being far superior to Glycerine, Cold Cream, or Camphor Balls in softening and healing properties. As a **HOUSEHOLD REMEDY** it is recommended as an application to Burns, Cuts, Bruises, and Sprains, Sunburns, Chilblains, and all other Skin Diseases, and the Bites of Poisonous Insects.

FOSSILINE (SIMPLE)

Sold in Bottles, One Shilling each; 8/ per dozen.

The following preparations may also be obtained:—

SAVAR'S FOSSILINE POMADE

Prevents the hair from falling off, and as a smaller quantity is sufficient for use, it is the most economical Hair Dressing known.

Sold in Three-Ounce Stoppered Bottles, One Shilling each; 8/ per dozen.

Also in Sixpenny Bottles; 4/ per dozen.

SAVAR'S FOSSILINE TOILET SOAP

Highly emollient and economical, the most agreeable Soap.

In Tablets, 6d. each; or in 1/6 and 5/ Boxes; 4/, 13/, and 48/ per dozen.

These Toilet Requisites are exquisitely perfumed with the delicate odours of the

MONTSERRAT LIME TREE BLOSSOMS.

SAVAR'S FOSSILINE PLASTER, PATENT,

Generally used in the leading Hospitals as a substitute for other Plasters, it adheres readily without warming, and is easily removed for inspection of wounds or re-dressing, and of great service (spread on Holland or Leatherine) as an application to bed sores.

Sold in Boxes, Ninepence each, or in bulk if required; 6/ per dozen.

SAVAR'S FOSSILINE CORN PLASTERS, PATENT,

Are emollient and cooling, and as they do not require wetting or warming, are easily applied.

In Boxes One Shilling each; 8/ per dozen.

SUBJECT TO THE USUAL DISCOUNT.

Be sure to ask for **FOSSILINE** and Savar's preparations of it, and see that you get them, and not any others SAID TO BE of a similar nature. See that the Trade Mark is on the label.



SOLE PROPRIETORS

EVANS, SONS & CO.,

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56 Hanover Street, Liverpool.

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H. SUGDEN EVANS & CO., Montreal, Canada, and Rouse's Point, New York.

LYNCH & CO.'S CATALOGUE

OF
DRUGGISTS' SUNDRIES,
SURGICAL INSTRUMENTS,
SHOP FITTINGS,
AND
PROPRIETARY ARTICLES.

TRADE MARK.

TRADE MARK.

FOR the convenience of our Customers, "Surgical Instruments" have been placed consecutive to "Druggists' Sundries," and a GENERAL INDEX to BOTH placed in front of the latter.

Any Chemist whose name has not already been placed on our Register should apply at once for a Copy to

LYNCH & CO.,
ALDERSGATE STREET, LONDON, E.C.

Sparkling Phosphate

A delicious Nervine Tonic Beverage, Non-alcoholic, Stimulating, Invigorating, Refreshing. The original preparation, containing Hypophosphites. Superior in composition and effect to any other article of its kind. Is the most agreeable aerated beverage extant. Sells well wherever introduced. Bears a good profit.

Certificate of Composition by Professor ATTFIELD, F.I.C., F.C.S., F.R.S.

"London, 17 Bloomsbury Square, W.C., July 31, 1880.

"I have analysed samples of 'Sparkling Phosphate' sent to me by Messrs. IDRIS & COMPY., and find the statement made to me by them respecting its composition to be correct. Each ordinary bottle (small champagne) contains in perfect solution four grains of the Hypophosphites of Iron, Calcium, Sodium, and Potassium, and Hypophosphorus Acid.

"JOHN ATTFIELD."

We guarantee that each bottle of "Sparkling Phosphate" is of the same strength and quality as that analysed by Professor ATTFIELD.

IDRIS & COMPY.

This Preparation obtained **Honourable Mention** at the
INTERNATIONAL FOOD EXHIBITION, OCTOBER, 1880,

This being the Highest Award given solely for a Beverage of that class.

The Judges were Dr. John Tripe, Medical Officer of Health for Hackney; Dr. Hardwicke, Coroner for Central Middlesex; G. W. Wigner, F.C.S., Public Analyst for Woolwich, Plumstead, and Greenwich; and Dr. H. C. Bartlett, Ph.D., F.C.S.

EXTRACTS FROM THE "TIMES."

REPORT OF THE BREWERS AND MINERAL WATER TRADES EXHIBITION.

October 5, 1880.—"SPARKLING PHOSPHATE, shown on the stall of Messrs. IDRIS, appears to be free from the after Medicinal taste observable in some Tonic waters."

October 6, 1880.—From the speech of Mr. WALTER, M.P., at the Annual Meeting of the Royal East Berks Agricultural Association at Maidenhead:—

"He found the exhibition most instructive and amusing. There was an infinite variety of articles connected with the vast industry of brewing and the kindred industries of soda-water making, and, indeed, of the manufacture of all sorts of delightful beverages. Nobody could imagine what an amount of ingenuity was displayed in those manufactures.

"The hall, in short, was full of curious modern inventions, and he had had the opportunity there of tasting a beverage which was new to him, and for which we were, no doubt, indebted to the temperance people, but which he found so palatable that he had ventured to order a few bottles of it to be brought there that evening, which he would ask any of his hearers with confidence to try without fearing the imputation of being guilty of treating. The beverage was called SPARKLING PHOSPHATE."

Wholesale Prices in quantities of not less than 1 Gross (for cash):—Half-pint Seltzer Bottles, 2/6 per doz.; retail, 4/-.

Small Champagne Bottles, 3/- per doz.; retail, 4/6. Large Champagne Bottles, 5/2 per doz.; retail, 7/6.

2d. per doz. additional in quantities of less than 1 gross.

Delivered free in London by our own Vans. Packed for the country in bin cases of 6 dozen small bottles or 3 dozen large, 1/- per dozen charged and allowed for bottles. Packing case, 6 dozen seltzer, 3/-; 6 dozen small champagne, 3/6; 3 dozen large ditto, 3/-. Carriage paid to the country on orders for 6 dozen small or 3 dozen large, if accompanied by remittance including bottles and cases. Full price allowed for bottles and cases if returned free in good condition.

WHOLESALE AGENTS:

LONDON—Messrs. Barclay & Sons.
" " Lynch & Co.
" " W. Best & Sons.

LONDON—Messrs. S. Maw, Son & Thompson.
" " Herrings & Co.,

BIRMINGHAM—Messrs. Southall Bros.
& Barclay.
EXETER—Messrs. Evans, Gadd & Co.

Sole Proprietors and
Manufacturers,

IDRIS & COMPY.,

Manufacturers of Pure Mineral Waters
of every description.

AGINCOURT WORKS, MANSFIELD ROAD, HAVERSTOCK HILL, LONDON, N.W.

FLETCHERS' CONCENTRATED LIQUORS

FOR THE EXTEMPORANEOUS PRODUCTION OF CHEMICAL SYRUPS.

For the many improvements which have been introduced into pharmaceutical practice during recent years, few preparations have met with such universal approval as FLETCHERS' CONCENTRATED LIQUORS FOR CHEMICAL SYRUPS. Amongst the qualities which have served to establish their reputation may be noted:—

Permanency. BEING obtained in the concentrated form by means of special processes which preserve intact the purity and activity of the respective Salts, and being, moreover, entirely free from SUGAR the LIQUORS are perfectly stable. When, therefore, a particular Syrup is required, the dispenser has only to add to the proper proportion of CONCENTRATED LIQUOR a certain volume of simple Syrup, in order to obtain the necessary combination in a state of the highest perfection.

Many of the combinations have never hitherto been made successfully. FLETCHERS' LIQUOR FERRI IODIDI, for example, is THE ONLY PERMANENT SOLUTION OF IODIDE OF IRON yet produced. Its stability is due to its exceptional purity, it being, in fact, a highly concentrated solution of ABSOLUTELY PURE ferrous iodide. The Syrup prepared from it is acknowledged by experienced Pharmacists to be FAULTLESS.

Uniformity. AS would be naturally expected, various makers adopt different formulæ for the manufacture of the non-official Syrups. In addition to this, many of the methods for producing the Syrups in small quantities are such that it is absolutely impossible to ensure concordant results. FLETCHERS' CONCENTRATED LIQUORS are prepared by STRICTLY ACCURATE CHEMICAL PROCESSES, the strength of each is checked by analysis, and the PROPORTION OF CONTAINED SALT STATED UPON THE LABEL.

Economy. A PART from the saving in expense by obviating the waste incurred through Syrups becoming spoiled and useless, a perusal of the accompanying Price List will show that by the use of the CONCENTRATED LIQUORS the former preparations can be produced AT A MUCH LOWER COST than would be otherwise possible. Not only of the CHEMICAL SYRUPS are only prescribed at comparatively rare intervals, and frequently happens that the dispenser finds that a supply of some Syrup, on which he has relied to meet a requirement, has become discoloured and thick, and in other respects, quite unlike the original preparation. This drawback is never experienced with the CONCENTRATED LIQUORS. They NEVER DECOMPOSE or BECOME UNSIGHTLY, and may, therefore, be kept for years without deteriorating in value.

A. B. Please preserve these pages for future reference

FLETCHERS' CONCENTRATED LIQUORS.

The following is a List of the Liquors in most frequent demand:—

Liq. Calcis Hypophosph., 1 to 7, per lb. 4/- <i>Each fluid drachm contains 8 grains of Hypophosphite of Calcium.</i>	Liq. Sodii Hypophosph., 1 to 7, per lb. 4/- <i>Each fluid drachm contains 8 grains of Hypophosphate of Sodium.</i>
Liq. Calcis Lactophosph., 1 to 7, per lb. 5/6 <i>Each fluid drachm contains 8 grains of Calcium Phosphate, combined with Lactic Acid.</i>	Liq. Zinci Phosph., 1 to 7, per lb. 3/- <i>Each fluid drachm contains 8 grains of Phosphate of Zinc.</i>
Liq. Ferri Bromidi, 1 to 7, per lb. 4/- <i>Each fluid drachm contains 34·4 grains of Bromide of Iron.</i>	Liq. Ferri et Quiniaz Cit., B.P., per oz. 2/- <i>Each fluid drachm contains half a drachm of Citrate of Iron and Quinine (British Pharmacopœia).</i>
Liq. Ferri Hypophosph., 1 to 7, per lb. 4/- <i>Each fluid drachm contains 8 grains of Hypophosphite of Iron.</i>	Liq. Ferri et Ammon. Cit., B.P., per lb. 1/4 <i>Each fluid drachm contains half a drachm of Citrate of Iron and Ammonia (British Pharmacopœia).</i>
Liq. Ferri et Manganes. Phosph., 1 to 7, per lb. 4/- <i>Each fluid drachm contains 4 grains of Phosphate of Iron, and 4 grains of Phosphate of Manganese.</i>	Liq. Ferri et Cinchonidin Cit., per oz. 1/3 <i>Each fluid drachm contains half a drachm of Citrate of Iron and Cinchonidine.</i>
Liq. Ferri Phosph., 1 to 7, per lb. 13/- <i>Each fluid drachm contains 8 grains of Ferrous Phosphate. One volume added to seven volumes of Syrupus, B.P., forms Syr. Ferri Phosph. of a uniform strength unattainable by the Pharmacopœia process.</i>	Liquor Phosphori, per lb. 4/6 <i>Each fluid drachm contains $\frac{3}{32}$ grain of Phosphorus in its most active form.</i>
Liq. Ferri et Quiniaz et Strychniaz Phosph., 1 to 3, per lb. 13/- <i>Each fluid drachm contains 4 grains of Phosphate of Iron, 4 grains of Phosphate of Quinine, and $\frac{1}{8}$ grain of Strychnia. One volume added to three volumes of Syrupus, B.P., forms "Easton's Syrup."</i>	Liq. Ferri Iodidi, 1 to 7 per lb. 10/4 <i>Each fluid drachm contains 34·4 grains of Iodide of Iron. This is the only permanent solution of Ferrous Iodide yet produced. It may be exposed for months in an open bottle without impairing the beautiful sea-green tint characteristic of the freshly-prepared salt. It produces a brilliant Syrup free from any yellow tint.</i>
Liq. Manganes. Phosph., 1 to 7, per lb. 3/- <i>Each fluid drachm contains 8 grains of Phosphate of Manganese.</i>	Liq. Ferri Phosph. Comp., 1 to 3, per lb. 3/- <i>Each fluid drachm contains, in addition to the Alkaline Phosphates, 4 grains of Ferrous Phosphate and 8 grains of Calcium Phosphate, dissolved in pure Phosphoric Acid. One volume added to three volumes of Syrupus, B.P., forms "Chemical Food" of a strength nearly double that of ordinary commercial specimens.</i>
Liq. Potassii Hypophosph., 1 to 7, per lb. 4/- <i>Each fluid drachm contains 8 grains of Hypophosphite of Potassium.</i>	

The above are supplied in $\frac{1}{4}$ lb., $\frac{1}{2}$ lb., 1 lb., and 7 lb. Bottles, each bearing our Name on the Label, and our Trade Mark (Ithuriel's Spear) on the Band over the Stopper, and are to be obtained at the prices annexed, from any WHOLESALE DRUG OR PATENT MEDICINE HOUSE, either in London or the Country.

COLONIAL AGENTS:

Canada: Messrs. H. SUGDEN EVANS & CO.

Melbourne: Messrs. FELTON, GRIMWADE, & Co.

Sydney: Messrs. ELLIOTT BROTHERS.

New Zealand: Messrs. KEMPTHORNE, PROSSER, & CO.

Samples free on application to the Sole Manufacturers,

FLETCHER, FLETCHER, & STEVENSON,
 NORTH LONDON CHEMICAL WORKS,
HOLLOWAY, LONDON, N.

FLETCHERS'

NEW SYRUPS of the HYDROBROMATES.

THE value of Hydrobromic or Bromohydric Acid as a remedial agent is now fully recognised by the Medical Profession.

The satisfactory results following its administration, recorded by Dr. J. Milner Fothergill in the *British Medical Journal* of July 8th, 1876, have been amply verified by eminent practitioners both in this country and abroad. Its efficiency as a substitute for bromide of potassium, which it quite equals in energy, is well known, and the special advantages which it possesses, compared with this and other alkaline salts of bromine, can scarcely be better summarised than in the following extract from a recent paper in *New Remedies*, by Dr. De Witt Wade:—"It is now generally admitted that the object of administering a bromine salt is to obtain the effects of bromine on the system. Now, doubtless, to obtain this effect, the salt must be decomposed by an acid, and the gastric acids are known to be capable, to a certain extent, of accomplishing this object. What is this extent? Its indefiniteness results from the variable amount of free acid present in the stomach at the time of the administration of the salt. If acids are entirely absent, the bromide will be absorbed and eliminated, and no effects of bromine will be obtained, for the effect always depends upon the amount of hydrobromic acid produced by the decomposition of the salt, and it is probable that generally a part of the salt becomes absorbed before being broken up, and the effect of the bromine of such part lost. This is the reason that hydrobromic acid was proposed as a medicine, thus avoiding the unreliability of the stomach as a laboratory. It is found chemically, as well as in theory, that a smaller amount of bromine, in the form of hydrobromic acid, will produce the specific effects of this halogen upon the system, than when administered chemically united to a base."

The principal object, however, which we have in view in calling the attention of the profession to the great usefulness of

this acid, is to point out the remarkable power which it possesses of preventing the unpleasant symptoms so frequently produced by salts of iron and quinine.

In Dr. Wade's paper, already referred to, the author states: "It (Hydrobromic Acid) certainly does prevent the occurrence of headache after each dose of quinine, in those who before had to desist from taking quinine for that reason. It also prevents the fullness in the head by some persons, especially those labouring under cerebral anemia after doses of iron. It is also useful in nervous conditions, and with quinine is excellent in those cases where there is much nervous exhaustion from excessive indulgence in tea or alcohol."

In a contribution to the *Transactions of the New York Medical Society*, Dr. Edward Squibb writes: "In those cases where small quantities of any of the salts of quinia produce head symptoms of disproportionate severity, so that the desired benefit of the antiperiodic cannot be attained because the sufficient dose cannot be borne, this acid is very useful, either given with the quinia salt, or later, when the head symptoms begin."

Dr. Wade's testimony on this point is also corroborative. He says: "Bromine has the power of modifying in a marked degree the cerebral effects of quinine; hence the value of its combination aside from the alterative and other properties of the acid. In all cases of intermittent fever, I continue an antiperiodic from ten to thirteen days after the paroxysm ceases, and for permanent and other satisfactory results a combination of quinine with hydrobromic acid has proved to be far superior in my hands to any other."

In view of these ascertained facts, it is evident that a combination of the Hydrobromates in an elegant and easily assimilable form must be extremely valuable in those cases in which other preparations of Iron and Quinine cannot be given.

SYRUP FERRI ET QUINIAE HYDROBROMAT.

(Syn. Syr. Hydrobromat.—Fletcher.)

Contains two grains of Hydrobromate of Iron and one grain of Hydrobromate of Quinine in each fluid drachm.

DOSE, one teaspoonful.

Dr. W. B. CROCKWELL (Moss Side, Manchester) writes under date July 5th, 1881:—

"A lady whom I attended a short time ago could not take Quinine in any form, as it always produced a most violent pain in the head. I prescribed it in the form of 'Syr. Hydrobrom.—Fletcher,' and am happy to say obtained all the good results of the drug, without the slightest disagreeable symptom."

Price, in bulk, 4s. 6d. per lb.

SYR. FERRI ET QUINIAE ET STRYCHNIAE HYDROBROMAT.

(Syn. Syr. Hydrobrom. c Strychnia.—Fletcher.)

Contains in each fluid drachm two grains of Hydrobromate of Iron, one grain of Hydrobromate of Quinine, and $\frac{1}{32}$ grain of Strychnia.

DOSE, one teaspoonful.

THIS PREPARATION POSSESSES ALL THE ADVANTAGES WITHOUT ANY OF THE DISADVANTAGES OF ASTON'S SYRUP, which in the majority of cases it might satisfactorily replace. It is an invaluable tonic in forms of nervous exhaustion.

Price, in bulk, 5s. per lb.

The above preparations may be obtained through ANY WHOLESALE DRUGGIST.

Samples, Testimonials, &c. free on application to the Sole Manufacturers,

FLETCHER, FLETCHER, & STEVENSON,
North London Chemical Works, HOLLOWAY, LONDON, N.

ALLETCHERS' CONCENTRATED LIQUORS.

OPINIONS OF PHARMACISTS.

Messrs. SYMES & CO. (Liverpool) write:—"We have carefully examined your Chemical Liquors, and have prepared the various Syrups therefrom. The Liquors are of full strength; the Syrups excellent."

Mr. H. HITCHMAN (Kettering) writes:—"I have used your preparations for a considerable time with great satisfaction, more particularly the Liq. Ferri Iodidi and Liq. Ferri Phosph. Comp., which form the best Syrups I have met with."

Messrs. READ & ORCHARD (Salisbury) write:—"We have been using your Liquors of late and are pleased with them. They are extremely convenient and carefully prepared."

Mr. HENRY GROVES (Florence) writes:—"I have been much pleased with your Liquors. They are just what so many Chemists must have long looked for."

Mr. GEORGE BROWN (Sandown) writes:—"I have found your Liquors keep well, and free from deposit. They produce elegant Syrups."

Mr. D. S. EYNON (Leamington) writes:—"I find the Concentrated Liquors in every respect most convenient and satisfactory. The Syrups made from them are excellent."

Mr. ALLEN SMITH (Sale) writes:—"I have used your Liq. Ferri Phosph. Comp. for some time, and like it. The 'Parrish's Syrup' made with it remains very clear and free from deposit."

Messrs. KERNICK & SONS (Cardiff) write:—"Your preparations have given us entire satisfaction, and in the concentrated form prove very convenient."

Mr. GEORGE V. BALL (Banbury) writes:—"I have found your Concentrated Preparations very convenient, and in every respect very satisfactory."

Mr. J. GUNN (Hambledon) writes:—"Your Liquor Ferri et Quiniae Cit. is a beautiful preparation, and must command an extensive sale."

Messrs. W. A. SMITH & CO. (Greenwich) write:—"We have found your Concentrated Liquors admirable in every respect."

Mr. J. L. SLACK (Manchester) writes:—"I have used several of your Chemical Solutions for preparing Syrups, and have found them convenient and economical."

Mr. J. ARBLASTER (Birmingham) writes:—"Your Concentrated Liquors fill a void in pharmaceutical preparations. So far as I have used them I am very pleased with them."

Mr. W. MORRIS (Worcester) writes:—"The Chemical Syrups made with your Liquors are satisfactory, alike to dispenser and customer."

Mr. A. DAVIDSON (Montrose) writes:—"It affords me great pleasure to bear testimony to the highly satisfactory state of 'Chemical Syrups' made with your Concentrated Liquors. They retain their elegance and freshness for a long time."

Messrs. COUPLAND & SON (Harrogate) write:—"We have found the Concentrated Liquors for Chemical Syrups very satisfactory."

Mr. J. TUPHOLME (West Brompton) writes:—"I much approve of your Liquors as supplying a pressing want to Chemists."

Mr. MacCREATH (Newton Stewart) writes:—"I find your Concentrated Liquors all that could be wished for, and consider them very satisfactory preparations."

Mr. T. WATERHOUSE (Uxbridge) writes:—"I have thoroughly tested your Concentrated Liquors, and I cannot speak too highly of them. I now use them to the exclusion of all other similar preparations in my Dispensary. They save time, are very reliable, and come as a boon to Dispensing Chemists. I get them regularly through my Drug House."

Mr. HORACE THOMAS (St. Leonard's-on-Sea) writes:—"I have used several of your Liquors for the last twelve months with great satisfaction, having found them most useful, convenient, and economical. The loss from keeping some of the Syrups made—particularly those containing iron—used to be considerable—a loss which your Liquors have entirely removed, not to mention the great advantage of having the Syrups of a uniform colour."

BRYANT & MAY,

FAIRFIELD WORKS, BOW, LONDON, E.

AWARDED 9 PRIZE MEDALS.

BRYANT & MAY'S Patent Special Safety Matches
in Dozen Packets and 1*d.* Boxes.

BRYANT & MAY'S Patent Family Match Safe,
containing Three Dozen of their Patent Special Safety Matches
with Three Decorated Cases, ornamental, damp proof, and
durable. Invaluable for family use.

BRYANT & MAY'S Glove Boxes of Ornamental
Metal ; sold empty, or filled with one dozen boxes of their Patent
Special Safety Matches, or one pound of their extra quality taper.

BRYANT & MAY'S Patent Safety Match Holders
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BRYANT & MAY'S Glass and Terra Cotta Stands
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BRYANT & MAY'S Novel Ornamental Post
Office Pillar Box, filled with Wax Vestas and containing
full postal instructions.

BRYANT & MAY'S 6*d.* and 1*s.* Wax Vestas in
Ornamental Flat Metal Boxes.

MANUFACTURERS OF ALL KINDS OF MATCHES, VESTAS,
AND CIGAR LIGHTS.

GOLD MEDAL.—MELBOURNE EXHIBITION, 1880-81.—HIGHEST AWARD.

TRADE **MALTINE.** MARK.

(EXTRACT OF MALTED



BARLEY, WHEAT, AND OATS.)

The Original and Only Preparation Composed of these three Cereals.

This Preparation contains from Five to Ten times the beneficial and nutritive elements found in any Alcoholic Extract of Malt.

Prescribed by the most distinguished and eminent members of the Medical Profession, and largely used for Patients at the principal Hospitals in the United Kingdom, in preference to all other Extracts of Malt.

THE **MALTINE** MANUFACTURING COMPANY'S **MALTINE.**

"WHEAT and OATS are especially rich in muscular and fat-producing elements."—*Liebig.*

MALTINE will increase both weight and flesh in most persons of thin habit.

MALTINE is particularly recommended for delicate females and for weak and debilitated Children and Infants.

For Deficient Lactation, and for Mothers whilst Nursing, **MALTINE** is especially recommended.

MALTINE is the most important combination in use for Constipation.

MALTINE is entirely free from all products of Fermentation, such as Alcohol and Carbonic Acid Gas.

MALTINE is very palatable and pleasant, and will be readily taken by the youngest Child.

COMPOUNDS.

FOR CONSUMPTION AND WASTING DISEASES.

MALTINE WITH PEPTONES—

A concentrated DIGESTED food. Indicated where natural digestion is in abeyance, in Malnutrition, Gastric and Intestinal Lesions, in Fevers, Phthisis, Pulmonary Affections, and all Wasting Diseases.

Each fluid ounce contains the nutritive properties of $\frac{1}{2}$ ounces of beef.

MALTINE with Cod-Liver Oil—

The most perfect emulsion and most agreeable and effective mode of administering this nauseous but valuable Oil yet discovered.

MALTINE with Cod-Liver Oil and Pancreatine—

In cases where the digestive organs are greatly overtaxed, Cod-Liver Oil, combined with Pancreatine (the principle that digests all oleaginous substances), can be given with advantage.

MALTINE with Cod-Liver Oil and Phosphates—

In Phthisis, where the Profession desire to prescribe Cod-Liver Oil, this will be found most efficient.

MALTINE with Hypophosphites—

This Preparation is specially indicated in Consumption, Rickets, and Deficient Ossification.

MALTINE with Phosphates—

The Phosphates are found in all vegetable matter, and in the blood, tissues, and excretions of man; by their use most important results may be obtained.

MALTO-YERBINE—

A most palatable and efficacious remedy and substitute for Cod-Liver Oil in the treatment of Consumption and Wasting Diseases; also the most perfect remedy yet produced in Chronic Pulmonary Affections, Coughs and Colds.

FOR INDIGESTION, GENERAL DEBILITY, &c.

MALTINE with Pepsine and Pancreatine—

One of the most effective combinations in Dyspepsia, Cholera Infantum, and all diseases resulting from imperfect nutrition.

MALTINE WINE with Pepsine and Pancreatine—

We can recommend this preparation in all cases of Dyspepsia and imperfect nutrition, when the system needs invigorating and replenishing. It will be found a perfect remedy in vomiting in pregnancy, Cholera Infantum, and Wasting Diseases of Children, and in Constipation and Chronic Diarrhoea, resulting from malnutrition, and will agree with the most irritable stomach.

MALTINE WINE—

This preparation is lighter and more acceptable to some stomachs, and is recommended only in such cases.

MALTINE with Beef and Iron—

One of the most valuable combinations in cases of General Debility, when there is a deficient nutrition and a deficiency of Iron in the system.

MALTINE with Phos. Iron, Quinia, and Strychnia—

A powerful nutritive, general, and nervous tonic.

MALTINE with Phosphates, Iron, and Quinia—

A powerful, general, and nutritive tonic.

MALTINE Ferrated—

This combination is specially indicated in Anaemia and Chlorosis, and in all cases of defective nutrition where Iron is deficient in the system.

FOR IMPURITIES OF THE BLOOD.

MALTINE with Alteratives—In this preparation **MALTINE** is combined with the most valuable alteratives known, such as Iodides, Bromides, and Chlorides, and has been found highly efficacious in obstinate cases of Syphilis, Scrofula, and all *depressed conditions of the blood.*

MALTINE and **COMPOUNDS**, in Bottles containing 8 and 16 fluid ounces, equal in weight to 12 and 24 ounces, 2/9 and 4/6. The Compounds, 3/6 and 6/6; and in Winchester Quarts, 120 ounces weight, 20/- and 29/-.

CAUTION.—Examine each Bottle and see that the Capsule is marked "The Maltine Manufacturing Company, Limited." Without it you have been imposed upon by a worthless imitation.

TESTIMONIALS

From Medical Practitioners and Hospitals in various parts of the world recommending our preparations have been *voluntarily* sent to us, and we shall be happy to show the originals to any one desirous of seeing them.

"'Maltine' exhibits in an eminent degree the starch-dissolving power of diastase; in fact, a teaspoonful is capable of converting instantaneously a surprising amount of stiff starch paste into a thin limpid liquid."—*Lancet.*

"The first example of a combination of the nutritious principles of these *three cereals* that we have seen. Clinical experience enables us to recommend 'Maltine' as a Nutritive and Digestive Agent, likely to prove an important remedy in pulmonary affections, indigestion, imperfect nutrition, and deficient lactation."—*British Medical Journal.*

"This preparation possesses many qualities of great importance; it is more portable than the liquid known as 'Malt Extract,' combining, as 'Maltine' does, the nutritious principles of *three cereals*."—*Medical Times and Gazette.*

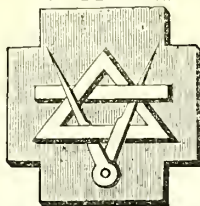
"We have prescribed 'Maltine' for several patients who were suffering from general debility, indigestion, &c., with marked benefit, and it appeared to sit easily on the stomachs of patients who were unable to take Stout or any other kind of Malt Liquor."—*Medical Press and Circular.*

The Maltine Manufacturing Company, Limited,
Corner of Great Russell and Charlotte Streets, LONDON.

"VICTORIA" OFNER MINERAL BITTER-WATER.

THE BEST AND CHEAPEST NATURAL APERIENT.

TRADE MARK.



As a safe, ordinary, and gentle aperient,
In inflammation and congestion,
In rheumatic and gouty disorders,
Against undue tendency to fat,
Against hæmorrhoids,
In bilious attacks and disorders of the liver,

During pregnancy and in many female diseases,
For habitual constipation,
In Organic Diseases resulting from fatty degeneration,
To remove the consequences resulting from excess in diet, &c.

The Proprietors of this Natural Spring of Laxative Water are desirous of bringing the leading features before the Medical Profession. The advantages specially claimed are, that it contains a larger amount of valuable active aperient solids than any other bitter water previously in vogue with the public, or prescribed by the faculty, and notwithstanding its rapid action as an aperient, it produces no uneasiness in its effects. It will be seen from the analytical data (below) of eminent Professional Chemists of England and the Continent, that this water contains nearly double the amount of Magnesia found in any other Bitter Water, hence it is entitled to be distinguished as a "SPECIFIC MAGNESIUM BITTER WATER."

Analysis of Prof. H. E. ROSCOE, F.R.S., Owens College, Manchester.				Special Analysis of Prof. M. BALLO, Chemist of the City of Budapest.				Analysis of Dr. G. L. ULEX, Official Chemist of the City of Hamburg.			
MAGNESIUM SULPHATE	..	..	..	32.8107	..	..	..	32.3800	..	..	33.60
SODIUM SULPHATE	..	..	..	17.1693	..	..	..	20.9540	..	..	19.55
POTASSIUM SULPHATE	..	..	..	0.4407	..	..	..	0.3105	..	..	1.28
CALCIUM SULPHATE	..	..	..	2.3304	..	..	..	1.6020	..	..	1.33
SODIUM CHLORIDE	..	..	..	1.7708	..	..	..	2.2431	..	..	2.28
SODIUM CARBONATE	..	..	..	1.1834	..	..	..	0.4980	..	..	2.10
ALUMINA	..	..	..	0.0108	..	..	..	0.0229	..	..	0.3
SILICA	..	..	..	0.0587	..	..	..	0.0444	..	..	0.6
PHOSPHORIC ACID	..	..	..	Trace	..	..	..	Trace	..	..	Trace

SUMMARY OF TOTAL SOLUBLE CONSTITUENTS .. 55.7198 .. 58.0549 .. 60.23

Do. Do. FOUND DIRECTLY .. 55.720 .. 58.156 ..

SPECIFIC GRAVITY AT 17°C. .. 1.0534 .. AT 17°C. 1.05362 .. AT 14°C. 1.055

From the above analysis it appears that the amount of total soluble constituents, and specially of Sulphate of Magnesia, is much greater than has been hitherto observed in any bitter water, the quantity of Sulphate of Soda being nearly double that found in the other similar waters from the same locality.—The other normal constituents of bitter mineral waters are more over present in the usual proportions, so that there can be no doubt that the "Victoria Spring" furnishes a water of great medicinal value, and one which, it may safely be affirmed, must eventually take the highest rank amongst waters of the kind.

Each bottle of your bitter water, I observe, bears a number as guarantee of the quantity of soluble constituents which it contains. This important improvement will be welcomed by all who have to prescribe or to use the water. Prof. H. E. ROSCOE, F.R.S., Owens College, Manchester.

Official Certificate of Professor M. BALLO, Official Chemist of the City of Budapest.

(Abstract.) From the Analysis which I have made of the Mineral or Bitter Water from the "Victoria Spring," which I collected personally, it appears that the water of this Spring, containing 58.156 gram. of total soluble constituents in 1,00 parts of the water, represents itself as the most concentrated and most efficacious mineral water of that kind.

The proportion of the two chief constituents of the Sulphate of Magnesia and Sulphate of Soda, as found in the water of the "Victoria Spring," is a peculiarity which distinguishes it from all the other waters of that kind, even from the same locality.

Prof. M. BALLO,
Chemist of the City of Budapest.

I have made an analysis of five bottles of this water shipped from Hamburg per sailing ship *Albatross*, Captain T. Brinnsa, bound for Rosario (La Plata). On arrival the seals were officially examined by the German Vice-Consul at Rosario, and duly certified as being intact and in good order. They were then re-shipped, and, on arrival in Hamburg, after a voyage lasting from January 16, 1879, to November 10, 1879, were again subjected to analysis, and found to be unaltered in their chemical properties, and in as good and efficacious a state as when shipped eleven months previously.

Dr. G. L. ULEX,
Official Chemist of the City of Hamburg.

Soluble Constituents and Sulphate of Magnesia in "Victoria Bitter Water," as compared with other Mineral Waters.

	Soluble Constituents.	Sulphate of Magnesia.
VICTORIA Bitter Water	55.77	32.87
Rákoczy	53.53	23.06
Franz Josef	52.29	24.78
Hunyady László	51.07	24.20
Hunyady János	41.73	18.44
Königsbitterquelle	37.55	16.68
Elisabeth	26.29	8.04
Püllsauer Bitterwasser	32.72	12.12
Friedrichshaller	25.29	5.15
Saidschlitz	23.21	10.96

Professor DOUGLAS MACLAGAN, F.R.S., Edinburgh, March 28th, 1879.

I have given a full trial to the "Victoria Spring" Mineral Water at the Royal Infirmary, and am able to say that it is an excellent Mineral Water. It is a reliable Laxative, and in none of the considerable number of cases in which I used it did it produce any undesirable effects.

Extract from Medical Surgical Press of Budapest.

I r. S. Low, in a paper read before the Congress of Hungarian Physicians at Budapest, in the course of his remarks, said: "At the head stands the 'Victoria' Bitter Water; by reason of its richness in SULPHATE OF MAGNESIA, it surpasses all other Bitter Mineral Waters."

For ordinary aperient purposes a half wineglassful may be taken at bedtime, or a wineglassful taken in the morning fasting. It is most efficacious when warmed to a temperature not below 60°, or when an equal quantity of hot water is added.

IMPORTANT FACTS TO BE NOTED WITH REGARD TO THE "VICTORIA BITTER WATER."

The Practitioner says:—"A chief advantage claimed for the 'Victoria' Water is the constancy of its composition, which the Company secure by special arrangements for bottling at the springs. The effect produced by a dose of the 'Victoria Bitter Water' is, therefore, less likely to vary than the effect of other waters, where the same precautions are not employed in bottling."

Retail Prices:—Litres, 1/6 per bottle; Half-Litres, 1/- per bottle.

Cases are free and contain either 25 Litre Bottles or 50 Half-litre Bottles. May be obtained of any Chemist or Patent Medicine Vendor in the United Kingdom.

THE "VICTORIA" NATURAL BITTERWASSER OF BUDAPEST, HUNGARY.

Wholesale Depot for England and Colonies:—92 & 93 Great Russell Street (corner of Charlotte Street), London, W.C.

The "Practitioner," Journal of Therapeutics and Public Health. Edited by T. LAUDER BRUNTON, M.D., F.R.S.

London, March, 1879. (Abstract.) "VICTORIA" OFNER BITTER WATER. This water is one of the same class as the Hunyadi János water, the latter containing forty-one parts of solids per thousand of water, as compared with fifty-eight parts per thousand of the "Victoria Water," and the amount of Sulphate of Magnesia is much greater in the latter water.

Opinion of the MEDICAL STAFF of the Public Hospital at Lemberg.

The experiments made with the Water of the "Victoria Spring" gave excellent results. This Mineral Water is highly efficacious, produces no uneasiness, and even a small dose of it will act more rapidly than any other Water of that kind. OSCAR WIDMAN, M.D.,

Senior Physician of the I. Sect. for intern disease at the Lemberg Public Hospital, the Inspector-Gen. of the Lemberg Hospital.

The French Government has authorised, by decree, the sale of "Victoria" Bitter Water in France, on the special recommendation of the French Academy of Medicine, on account of the large amount of valuable active aperient solids, and the very good attributes of the "Victoria" Bitter Mineral Water.

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HAS BEEN AWARDED
FIVE PRIZE MEDALS
FOR SUPERIORITY,

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Its Superior advantages over all other Extracts of Meat are:—

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4. It retains its quality and flavour, unaffected by time or climate.
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FROM NEW ZEALAND.

UNSOLICITED TESTIMONIAL TO

MR. N. G. WILCOCKS,
SODA WATER MACHINIST,
BACK STREET, BATH.

From THOMSON & CO.,

Steam Aërated Water Works,
BOND AND CRAWFORD STREETS, DUNEDIN;
CHELMER STREET, OMARU; and
SPIT, NAPIER.

To Mr. N. G. WILCOCKS.

Engineer,
BATH.

March 25th, 1881.

"Dear Sir,—We wish to convey to you, unsolicited, our appreciation and entire satisfaction with the Double Soda Water Pumps (large size) made by you and forwarded to us by Edgar Breffit & Co., London and Yorkshire. These reached Dunedin, per ship 'Zealandia,' in 1880, in splendid order and condition. We have had them working constantly six or seven months now, and for cheapness, durability and finish, combined with their strong carbonating power, we have seen nothing to equal them in 20 years' practical experience.

"We are, dear Sir, yours faithfully,

"THOMSON & CO."

Mr. Wilcocks can give numerous references to Pharmaceutical Chemists and others (which are kindly permitted) who use his make Machines, and will forward his Illustrated Price List, post free, on application.

**Steam Engine and Boiler supplied for
SOUTH AFRICA.**

London, May, 1881.

Dear Sir,—We are glad to inform you that the Steam Engine and Boiler, shipped by us to the Cape, in December last, still works well. Our client, in a letter just to hand, writes:—"You will be pleased to hear that the little Engine is still working beautifully; it is certainly a vast improvement on the hand power."

Faithfully yours,
BURGOYNE, BURBIDGES, CYRIAX & FARRIES.

To Mr. N. G. Wilcocks, Engineer, Bath. pro J. W. J. B.

Emmanuel Street, Cambridge, May, 1880.

Dear Sir,—We have been using your "Eclipse" Filling Machine this week. We find that it can fill the bottles very well.—Yours faithfully,
Mr. Wilcocks, Bath. I. LAMBERT.

Anerley Road, Norwood, S.E., London, April 16th, 1881.

Dear Sir,—I have now had your Machinery in use for over six months, and as far as I can judge from workmanship is equal to the London makers, and at least 20 per cent. less in cost. I shall be pleased to show my plant to anyone you like to refer to me.

Yours faithfully,
Mr. N. G. Wilcocks, Bath. J. G. PREBBLE, Chemist.

By Appointment.—W. E. STOKES, Chemist, Brompton, Kent,
Established 1812, April, 1881.

"Eclipse" Soda Filling Machine to hand, have tried it in two or three different Patent Bottles, and appears to answer admirably well.

Bell Street, off Pole Street.

From James Lund's Aërated and Mineral Water Manufactory.
Dear Sir,—I have the pleasure to inform you that the Boiler, Engine and Soda Water Machinery, &c., I got from you give me every satisfaction, it works excellently and turns out first-class Aërated and Mineral Waters.

To Mr. N. G. Wilcocks, Yours truly,
Soda Water Machinist, Bath. JAMES LUND.

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July 15, 1881.

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FOR STOPPING DECAYED TEETH.

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To retail at 1d., on Show Card of half gross.

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12 sticks in a glass-lid box, each stick enclosed in a gelatine or gilt case, to retail at 1d. each; 2/- per box.

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In 1 oz. sheet; 12/- per doz.

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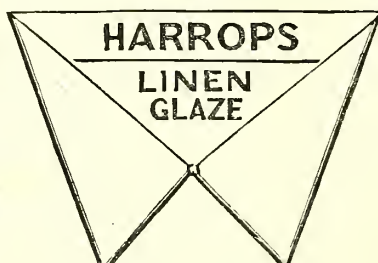
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4	"	Second	"	...	...	"	70	5	10	0
5	"	Third	"	...	...	"	80	4	5	0
6	"	Rough, for Stable use	...	...	...	"	100	2	12	0
7	"	First quality	...	...	...	medium bath sizes	24	5	14	0
8	"	Choice quality	...	...	...	large	18	6	18	0
9	"	Fine	"	...	...	"	18	4	15	0
10	"	Good	"	...	...	"	18	2	14	0
11	"	First	"	...	...	small	200	3	10	0
12	"	Second	"	...	...	"	200	1	14	0
13	Turkey, Cups,	First	"	...	...	bath sizes	40	14	15	0
14	"	Second	"	...	...	"	40	11	10	0
15	"	First	"	for Toilet	...	assorted sizes	70	17	18	0
16	"	Good	"	"	...	"	70	14	15	0
17	"	Second	"	"	...	"	70	10	18	0
18	"	Useful pieces	"	...	...	"	70	7	7	0
19	"	First quality, for Nursery	...	...	...	"	190	9	18	0
20	"	Second	"	"	...	"	200	7	15	0
21	"	Solid,	First	"	for Toilet	...	150	10	10	0
22	"	"	Second	"	"	"	100	5	6	0
23	"	"	First	"	for Nursery	...	200	7	17	0
24	"	"	Second	"	"	"	170	3	18	0
25	"	Brown,	Fine	"	...	"	175	3	17	0

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Honeycomb	...	...	...	...	...	...	per lb.	6/0, 8/0, 10/0, 12/0 and 0	15	0	0	
"	Small	...	...	...	...	...	...	per lb.	4/0 and 0	6	0	
Turkey, Cup,	for the Bath, from 3 to 6 to the lb.	...	...	...	...	...	per lb.	30/0, 38/0 and 2	5	0	0	
"	"	for the Toilet, from 8 to 18 to the lb.	...	...	...	...	"	30/0, 35/0 and 2	0	0	0	
"	"	"	fine, from 8 to 18 to the lb.	...	...	...	"	45/0, 50/0 and 3	0	0	0	
"	"	for the Nursery, from 25 to 40 to the lb.	...	...	...	...	"	20/0, 25/0 and 1	10	0	0	
"	Eye	...	...	...	...	...	"	12/0, 16/0 and 1	0	0	0	
"	Solid, for the Nursery, from 25 to 40 to the lb.	...	...	...	...	...	"	12/0, 16/0 and 1	0	0	0	
"	"	for the Toilet, from 6 to 18 to the lb.	...	...	...	...	per lb.	12/0, 16/0, 20/0 and 1	5	0	0	
"	Rough, suitable for Slates, &c.	...	...	...	...	...	per lb.	4/0, 6/0 and 0	8	0	0	
"	Carriage	...	...	...	...	...	per lb.	8/0, 12/0, 16/0 and 1	0	0	0	
"	"	brown	...	...	...	...	per lb.	4/0, 6/0 and 0	8	0	0	

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By GIOVANNI FOCARDI.



FROM TRADE LETTERS.

The Broadway, Tunbridge Wells.

"The Statuette has been a brilliant advertisement: my Pharmacy is visited by every one curious to see the "DIRTY BOY." The local press have given it a most flattering notice.

Yours faithfully,

GEORGE CHEVERTON;

Cooper's Effervescing Lozenge Warehouse, Oxford Street, London, W.

"YOU DIRTY BOY" is a never ending amusement: every passer stops to smile.

W. T. COOPER.

"THE DIRTY BOY" is the attraction of the town. It is worth £20 to me as an advertisement alone.

F. FOSTER, Druggist, Scarboro'.

Trade Price of Terra Cotta Reproductions, Delivered in London.

£6 6s.

Height of the figure.	Size of its base. Depth.	Width.
25 in.	17½ in.	13½ in.

"YOU DIRTY BOY!"

By GIOVANNI FOCARDI.

Of the many thousands of varied and beautiful exhibits at the Paris Exhibition nothing has proved so attractive or is so well remembered as this wonderfully realistic Statuette, well named in the pages of "Punch" as "*a souvenir of 1878*," and it will always be associated with this the greatest of all International Exhibitions as the "*pièce de résistance*"—the one thing universally known and admired. There is always some such remembrance of each Exhibition, from 1851 with its "Happy Boy and Unhappy Boy," and 1862 with its "Reading Girl," to this present instance, but in no former case has so extensive a popularity been achieved. The experience it delineates is so common to us all, and the work of the sculptor so thoroughly true to nature, that it at once appeals to the youngest as well as the oldest amongst us. On its pedestal in Paris it was from morning to night surrounded by a crowd representing the people of every nationality, the expression in every face testifying to the skill of the sculptor and the irresistible humour of his subject. It is now well known that this Statuette was a commission in the marble from A. & F. PEARS, Soap Makers to H.R.H. the Prince of Wales, to Signor Focardi, at a cost of £500, for the adornment of their Warehouse, and the Proprietors, at the request of many Connoisseurs and admirers of Art, have caused reproductions to be made in Terra Cotta of about the size of the original marble, which they now offer at the prices annexed. As an attraction for the Wholesale or Retail Warehouse in any business it has never been equalled, for, as Mr. George Augustus Sala has said of it, it arrests the attention of "old and young, gentle and simple;" and it may be safely stated that, displayed as an advertisement and means to popularity, it is the cheapest ever offered, for an expenditure of ten times the amount on newspapers or other advertisement in the public press would fail to produce an equal notoriety in any city or town of the world. On opposite page are a few extracts from among hundreds of criticisms.

A. & F. PEARS,

WHOLESALE AND EXPORT

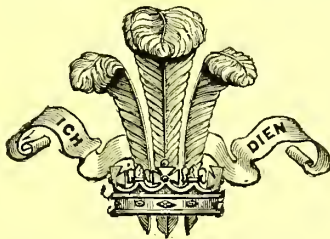
PERFUMERS AND FANCY SOAP MAKERS,

ESTABLISHED 1789,

INVENTORS OF THE

GENUINE TRANSPARENT SOAP.

BY SPECIAL
APPOINTMENT
SOAP MAKERS



TO
H.R.H. THE
PRINCE OF WALES.

PRIZE MEDALS AWARDED.

London, 1851; London, 1862; Paris, 1867; Santiago, 1875; Philadelphia, 1876;
Paris, 1878; Sydney, 1879.

Warehouses—38 & 91 Great Russell St., London, W.C.

**Factories—LANADRON WORKS, PEARS-VILLE WORKS, and ORCHARD WORKS,
ISLEWORTH, W.**

THE
ARTHRITIC SALINES
ARE
THE NEW GOUT REMEDIES.

They are prepared from the prescriptions and under the direction of an eminent London Surgeon, and perfected for general use by

MESSRS. ELLIS & ELLIS,
of the well-known works and fount of the
“RAVEN SPRING,” MITCHAM, SURREY.

The **ARTHRITIC SALINES** are these:—

1. The **“ANTI-GOUT EFFERVESCENT,”** a brilliant and pleasant Table-water.
 2. The **“ARTHRITIC SALINE,”** in the form of an Effervescing Powder, taken in water, and an admirable alterative and anti-gout medicine.
 3. The **“TONIC ARTHRITIC SALINE”** is likewise an Effervescing Powder, with the addition of several well-esteemed tonic constituents.
-

ALL FURTHER PARTICULARS MAY BE OBTAINED BY LETTER TO

MESSRS. ELLIS & ELLIS,
RAVEN SPRING, MITCHAM.

Specimen Dose, free by post, for six stamps.

TRADE MARK.

**G. F. SNOOK & SON,**

TRADE MARK.

**WHOLESALE AND EXPORT MANUFACTURERS,**

Beg to draw the attention of Druggists' Sundries Dealers and Shippers to the following List of Goods, all of superior quality and finish, of our own manufacture.

PRICE LIST ON RECEIPT OF BUSINESS CARD.

The Genuine Brown Arnicated Felt Corn and Bunion Plasters.
 The Genuine White Arnicated Felt Corn and Bunion Plasters.
 Court Plaster, in Leather, Fancy Wood, Plaid and Fancy Paper Cases, Envelopes, &c.
 Gold Beater's Skin, in Handsome Cases, Wrappers, Envelopes, &c.
 Toilet and Bath Gloves, in Great Variety and New Patterns.
 The New Bath Sponge Glove, with Thumb, filled with small pieces of Sponge.
 Bath Sponge Pads, Belts, &c.
 Felt Chest and Lung Protectors, of Finest Wool and superior finish.
 Chamois and Flannel Chest and Lung Protectors.
 Magnetic Appliances for all parts of the body.
 Respirators of all kinds and of superior manufacture.
 Waterproof Sponge Bags, Bathing Caps, Nursing Aprons, &c., &c.
 Suspensory Bandages of all kinds, in Silk and Cotton.
 Hydropathic Water Compressors for all parts of the body.
 Ladies' and Gents' Belts of all kinds.
 Vaccination Shields.
 Ladies' and Gents' Braces for Round Shoulders.
 Higginson's Enemas, Perfection Enemas, &c.
 Gutta Percha Tooth Stopping in all Styles, of superior quality.
 Superior Extra Perfumed Violet Powder, in Packets and Boxes of all sizes.
 Superior Prepared Fuller's Earth, packed or in bulk.
 Insect Powder, from 1d. to 1s. size.

G. F. S. & S. beg to state they manufacture exclusively for Wholesale and Exportation. Buyers of Large Parcels may have their own Name on all our Goods.

SPECIAL QUOTATIONS FOR LARGE QUANTITIES.

**Agents for Spungio and Impermeable Piline and Oil Silk,
 Degraeve's Corn and Wart Pencils, &c.**

376 CITY ROAD, LONDON, E.C.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.

JOHN OAKEY & SONS,

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Pumice, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakey's Patent India-Rubber Knife Boards, Bnff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Packets 3d. each; and Tins, with perforated Tops to prevent waste, 6d., 1s., 2s. 6d., and 4s. each.

OAKEY'S NON-MERCURIAL SILVERSMITH'S SOAP,

For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKEY'S POLISHING PASTE,

For Cleaning Brass, Copper, Tin, Pewter, &c., &c. Boxes, 1d.; Tins, 2d.; Pots, 6d. and 1s. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

WELLINGTON EMERY & BLACK LEAD MILLS, Westminster Bridge Road, London, S.W.

Highest Award and Prize Medal, Philadelphia Exhibition, 1876.

Needham's
Polishing Paste,
For Cleaning Brass,
Copper, and Britan
Metal Goods, &c.

Pickerings' Razor
Paste,
For sharpening Razors, &c.

Waterproof
Harness Blacking,
For Black Leather
Harnesses.

DIPLOMA OF MERIT, VIENNA EXHIBITION, 1873.
Joseph Pickering & Sons (J. Needham), Albion Works, Sheffield,
MANUFACTURERS OF



Sheffield Knife
Powder,
For Table Knives, F
Irons, &c.

Plate Powder,
For Electro-plate
Articles, &c.

Furniture Polish
For cleaning French
Polished Furniture, &c.

Brunswick
Black,
For all kinds of
Iron Work.

SOLD BY ALL CHEMISTS, GROCERS, IRONMONGERS, ETC.

"LA BRILLANTINE"

(REGISTERED)

Is used by the Life, Horse, and Dragoon Guards,
the Fire Brigades, &c.

METALLIC POWDER

For Cleaning and Polishing Metals and
Glass (especially Brass).

PROPRIETORS—

J. F. BAUMGARTNER & CO.

22 NEWMAN STREET, OXFORD STREET

LONDON, W.,

And all Wholesale Houses. Beware of Imitations.

MARBLE RENOVATOR,

For Cleansing and Polishing Marble. Retail at 8d., 1s. 2d., and 2s.
Surprising in its Effects.

"ANTI-RUST,"

For Preserving all kinds of Polished Steel, Iron, and Gun Metal from Rust.
Used with Success by some of the largest Sheffield Steel Manufacturers.

Retail at 1s. Wholesale from—

CUBLEY & PRESTON, 4 High Street, SHEFFIELD.

And all Wholesale Houses.

W. S. YATES,

Chemists' Shop Fitter, Shop Front Builder,
and Glass Show Case Maker.

PLANS AND ESTIMATES SUPPLIED FOR WORK IN ANY PART
OF THE KINGDOM.

9 CAMDEN STREET, LIVERPOOL.

INDEX TO ADVERTISEMENTS,

See Pages 43 & 44.

Goddard's Plate Powder

For nearly Half a Century this Powder has sustained an unrivalled
reputation throughout the United Kingdom and the Colonies as the BEST
and SAFEST article for Cleaning Silver and Electroplate.

Sold in Boxes, 1s., 2s. 6d., and 4s. 6d. each. Also

GODDARD'S FURNITURE CREAM

Sold by all Patent Medicine Houses and Wholesale Druggists,
Manufactured by J. GODDARD, Station St., Leicester.

FOR CLEANING PLATE

BRADLEY & BOURDAS'S

ALBATHUM or WHITE ROUGH

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge,
a quarter of a century ago, the sale has amazingly increased
both at home and abroad. A trial is only needed to prove
superiority over other plate powders in use. Sold in Boxes
1s. and 2s.; Tins, 6s. 6 Pont Street, Belgrave Square
and 48 Belgrave Road, London, S.W.

LONDON.

WOOD STAINS,

"SPECIAL."

MAHOGANY, OAK, WALNUT,
SATINWOOD,
ROSEWOOD, EBONY.

Draught, or packed in 6*z.* bottles ($\frac{1}{2}$ -pint).
Also in powder.

SHOW BOARDS,

With specimens of the Stained Woods,
supplied.

The demand for these Stains is steadily increasing. They possess great richness and truth of colour, and

ARE OFFERED AT A REASON-
ABLE PRICE.

ESTABLISHED 1853.

RETAIL PRICES:

To be obtained of all Chemists, Artists' Colourmen, and Druggists' Sundriesmen.

NEW 1s. 6d. and 2s. 6d. PACKETS.

A Copper and Silver Paint, at the same prices, and yielding equally good results, can be obtained.

NOTICE.—The Gold Paint is so easy of application, economical in use, and excellent in appearance, that it is extensively employed in the mental Gilding of Decorative Mouldings, Carvings, and all Fancy Ornaments made either of Metal, Wood, Porcelain, or Plaster, and the effect can be produced, even by unskilled hands, makes it useful to all engaged in fancy or home embellishment.

le Proprietor
Manufacturer. } **RICHARD J. ALLEN**, Mansfield Place, Kentish Town, London, N.W.

If Translations are supplied, Circulars, Cards, or Labels will be printed in any language necessary for its sale.

s still the best for producing a clear and healthy skin.

Used in the Royal Stables, by the Army, and in Hunting Establishments.

The best thing made for cleaning Saddles.

MAY BE HAD OF ANY SADDLER.

RECKNELL TURNER & SONS,
HAYMARKET, LONDON, ENGLAND.

(Secured by Royal Letters Patent),

For Polishing Furniture, Papier Maché, Marble Articles, &c., with half the usual labour; removes Moths, &c., from contents of drawers and wardrobes, and is free from the unpleasant odour of turpentine.

In Bottles, 8d., 1/2, & 2/ each.

TERMS ON APPLICATION TO THE PATENTEES,

CARRUTHERS & ALLAN,
60 Robertson St., Glasgow.

GEORGE TREBLE & SON,

Druggists' Shops Fitted and Furnished complete with
Fixtures, Bottles, Jars, Carboys, and
Specie Jars by contract.

Plans and Estimates
supplied.

DRUGGISTS' SHOP FITTERS BY CONTRACT

OFFICES
AND
SHOW ROOMS.

72, 74, 76, 78, and 80 CRONDALL STREET

Steam Works—

44, 46, 48, 50 & 52 WHITMORE ROAD, & BRIDGE WHARF, REGENT'S CANAL

Office for all Communications—

78 CRONDALL STREET, HOXTON, LONDON, N

[BEST WORK ONLY.]

[BEST WORK ONLY.]

FILMER KIDSTON,

MEDICAL SHOP FITTER & SHOW CASE MAKER
AND MANUFACTURER OF EVERY DESCRIPTION OF DRUGGISTS' FURNITURE.

NOTICE.

Chemists commencing Business, Fitting-up Shops, or making alterations to their premises, should first inspect KIDSTON'S modern and unique style manufacture, so much approved of by the Profession for its elegant appearance and superior finish.

Plans and Estimates supplied. Gentlemen are invited to inspect KIDSTON'S

PRIZE DISPENSING COUNTER

Which can be seen at the Show Rooms,

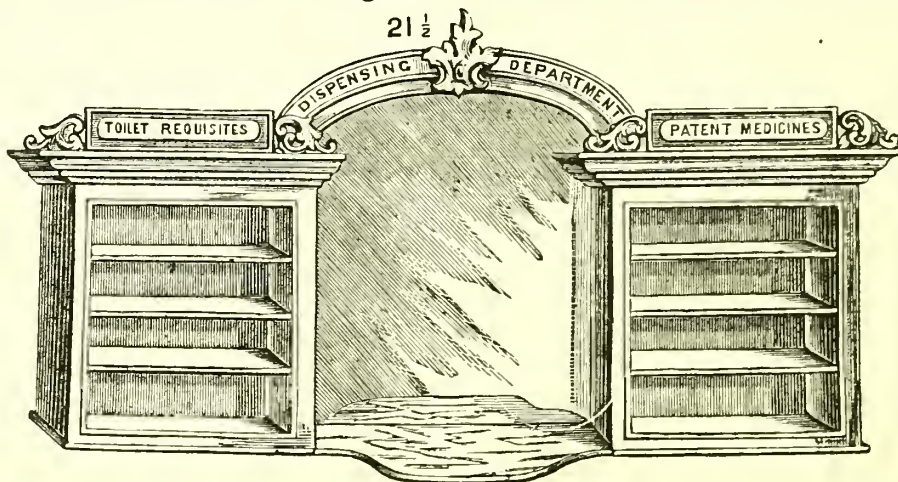
DUKE STREET, BRUSHFIELD STREET, BISHOPSGATE, LONDON.

ILLUSTRATED LISTS OF SHOW CASES ON APPLICATION.

R. TOMLINSON,

DRUGGISTS' SHOP-FITTER, SHOW-CASE MAKER
AND MANUFACTURER OF DRUGGISTS' SUNDRIES,
15 St. PAUL'S SQUARE, BIRMINGHAM

This Case is made of choice Mahogany, with Mirror in centre, and is lined at back with Black Enamelled Leather Cloth; it has Plate-Glass Shelves, Glass Knobs on the Doors, a Marble Slab in the Centre, and is fitted with Three Shelves at back. The Case is 6 feet long, 29 inches to cornice, 33 inches to top of tablets, and 36 inches to top of centre mirror.



For Export or easy transit it is admirably adapted, as it takes to pieces, and can be fixed again in an hour. Packs into a Case 34 by 36, at a cost of 10s. 3s. of which is allowed if the empty is kept, and the full value allowed if returned carriage paid.

Price, £8 10 0

VALUATIONS EFFECTED.

BUSINESS TRANSFER AGENT.

Second-hand Fixtures for Sale, Jars, Globes, Drawers, Bottles, Counter Glass Cases, Shelves, &c.

SECOND-HAND FIXTURES OF ALL KINDS BOUGHT AND EXCHANGED.

R. T. will wait upon parties fitting up, to plan and advise. 2nd-class fare only charged

FOR SALE, FIXTURES FOR SHOP ABOUT SIXTEEN FEET BY TWELVE. WRITE FOR LIST.

SPONGES!

R. CRESSWELL & CO.,
PONGE MERCHANTS & IMPORTERS,
32 Red Lion Square, London;
AND AT PIRÆUS AND SMYRNA.

ESTABLISHED 1850.

The Finest Qualities and Shapes obtainable are
 quoted below, and the Prices are, without excep-
 tion, the **LOWEST IN THE MARKET.**

PRICES CURRENT OF SANDED & SANDLESS SPONGES, IN ORIGINAL CASES AS IMPORTED.

HONEY-COMB SPONGES.

Qty.		Pieces in case about.	Price case. £ s. d.
1st	Finest selected shapes, assorted sizes	130	12 0 0
1st	Do. do.	75	7 0 0
1st	Do. do.	45	4 0 0
1st	Small selected shapes	275	7 0 0
1st	Superior do. large Bath sizes	25	7 0 0
2nd	Do. quality shapes, assorted sizes... ..	125	8 0 0
2nd	Do. do. do.	75	4 4 0
2nd	Good quality shapes, small	275	3 10 0
2nd	Do. do. large Bath sizes	25	5 0 0
3rd	Do. do. assorted sizes	145	5 5 0
3rd	Do. do. do.	90	3 10 0
3rd	Do. do. large Bath sizes	25	3 0 0
4th	For Stable use, &c.	125	1 5 0

FINE TURKEY SPONGES.

1st	Finest selected Cups, assorted sizes	110	18 0 0
1st	Do. do. do.	55	10 0 0
1st	Do. do. Bath sizes	35	12 0 0

Fine Turkey Sponges—continued.

No.	Qty.		Pieces in case about	Price case. £ s. d.
17	2nd Superior Cups, assorted sizes	...	110	12 0 0
18	2nd Do. do.	...	55	7 0 0
19	2nd Do. Bath sizes	...	35	9 0 0
20	3rd Fine Cups, assorted sizes	...	110	9 0 0
21	3rd Do. do.	...	65	5 5 0
22	3rd Do. Bath sizes	...	35	7 0 0
23	1st Turkey Solids, assorted sizes	...	115	7 0 0
24	2nd Do. do.	...	110	5 10 0
25	1st Flat Saddle, assorted sizes	...	55	9 10 0
26	1st Do. do.	...	35	6 0 0
27	2nd Do. do.	...	55	6 5 0
28	2nd Do. do.	...	35	4 0 0

BROWN TURKEY SPONGES.

29	1st Finest selected, assorted sizes	...	140	4 10 0
30	1st Do. do.	...	75	2 15 0
31	2nd Superior quality, do.	...	140	3 3 0
32	2nd Do. do.	...	75	2 0 0
33	3rd Slate quality, do.	...	350	1 1 0

The above may be had Sanded or Sandless, as required.

ALL COMMUNICATIONS TO BE ADDRESSED TO LONDON OFFICES.

TRADE PRICE

WEBSTER'S MANILLA CABINET PAPER.

The true specific for Piles.



This paper is manufactured from Manilla grass and is impregnated with the following medicaments, viz.:—Carbolic Acid, Wormwood, and Bromo-Chloralum, in such proportions as to render its use at once healing and preventive.

The formula is the property of the eminent Dr. Webster, who testifies that "during a lengthened experience" he has "never known it to prove inoperative."

SOLD IN CARTONS, CONTAINING 500 SHEETS, AT

2/- each.

SOLE PROPRIETORS AND MANUFACTURERS—

LYNCH & CO.,

171a & 171b, ALDERSGATE STREET,
LONDON, E.C.

TO BE HAD OF ALL RESPECTABLE CHEMISTS.

11s. 6d. per doz., less usual Discount.

SPECIAL PRICES

FOR QUANTITIES.

ESTABLISHED 100 YEARS.**TOILET AND FANCY SOAPS**
OF EVERY DESCRIPTION.**CHOICE PERFUMES IN BULK.**

No. 1 extra 12/ per pint of 20 ozs.

No. 1 9/6 " "

No. 2 8/ " "

*Put up also in great variety of size, style, and price.***SOAPS.**

Zinc, Sulphur, Petroleum, 6d. & 1/

Petrolene, Juniper Tar, & 4/ & 8/

other Medicated Soaps .. doz.

Glycerine Jelly, 6d. and 1/

stoppered bots., 4/ & 8/

per doz.

T. F. BRISTOW & CO.
TOILET SOAPS & PERFUMERY.
MANUFACTURERS,
PRICE LISTS
ON APPLICATION.**BRISTOW'S SPECIALITIES.**

Carbolic Acid Soap..... In boxes 3 tblts.

Glycerine and Carbolic Acid 1/ & 1/6

Glycerine and Oatmeal Soap .. 8/ & 12/ per dz.

Baby Soap for Nursery use { In boxes, 4 & 12 tblts.

(Illustrated Label) 19/ and 27/ per doz.

Family Soap, in boxes, 4 & 12 tblts (1/ & 2/9) 8/ & 24/ "

Cold Cream Soap, in boxes, 3 tblts. in box (1/6 & 2/6) 12/ & 21/ "

Stockholm Tar Soap } in boxes, 3 tablets in box (1/6) 12/ "

Pure Coal Tar Soap } in 4d., 6d. & 8d. tblts, in 3 doz. boxes, 2 6, 3 6, 4 6 doz.

Transparent Soap, in boxes 3 tablets (1/ and 1/6) 8/ & 12/ "

Superior Lavender Soap, in boxes, 3 tablets (1/ and 1/6) 8/ & 12/ "

White Glycerine Soap, in boxes, 3 tablets (1/6) 12/ "

Dog Soap (Illust. Wrapper), Carpet & Cloth Soap, Pumice Stone Soap (6d. & 1/) .. 3 6 & 7/ doz.

5 BISHOPSGATE AVENUE, LONDON.**FRENCH PATENT SCREW GLASS POTS & BOTTLES,**
WITH METALLIC CAPSULES.

The above new method will show advantageously Jams, Jellies, Honey, Dragés, Cachous, Pills, Lozenges, &c., is specially adapted for Export, and excels all others for neatness and elegance. Made in various new Designs—Pots, "Kalis" tube-shaped Bottles, Bocalis, &c. Spécialité for Bottles for all kinds of Confectionery, Essences Manufacturers, and Sundries. (Wholesale only.)

THE LARGEST ASSORTMENT IN ENGLAND.**G. V. DE LUCA, French Flint Glass Manufacturer, 21 Jewin Crescent, LONDON, E.C.****TO BE HAD OF ALL DRUGGISTS' SUNDRIESMEN.****THE CONDY'S FLUID CO.,****7 Falcon Street, London.****BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR**
FIRM AND GENUINE PRIZE MEDAL LABELS, WITH
FICTITIOUS ADDRESSES.**CHEMISTS' AND DRUGGISTS'**
SHOP BOTTLES AND JARS**WITH BURNT-IN LABELS.**Narrow-mouthed and Wide-mouthed Bottles, well
Stoppered.

Capped and Tube-stoppered Oil Bottles.

Syrup Bottles, with Plug Stoppers of Dark Blue or
White Opaque Glass.

Lozenge Jars with Cut Glass Knobs.

Cut Perfume Bottles, Round, Oval, and Square.

Shop Jars of Best Porcelain, thoroughly Grease
Proof.*Labels Indestructible and of Elegant Appearance.***PRICES ON APPLICATION.***A Large Variety of Samples on Show at***H. POTHS & CO.,****4 SUGARLOAF COURT****50 LEADENHALL STREET, LONDON, E.C.**Two Shops completely fitted with these Bottles and
Jars may, by permission of the owners, be inspected at
Messrs. Twinberrow & Son, 80 Wigmore Street, W.;
and in an entirely different style at Mr. M. Buchner's,
124 High Street, Whitechapel.**LLOYD RAYNER'S**
£75 CHEMIST'S SHOP**FITTED COMPLETE WITH ALL NEW GOODS,****INCLUDING****GLASS SHOW CASES, SHOP BOTTLES, JARS, &c.***If for Export, suitable for any climate, including
Packing Cases, and delivered to any of the
London Docks, free, £85.***The above Fittings are suitable for a Shop
14 feet long by 12 feet wide.****WHOLESALE AND RETAIL DRUGGIST'S, SURGEON'S,
AND DENTIST'S VALUER.****An Extensive Stock of Chemist's, Surgeon's, Dentist's, Grocer's
and other Trade Fixtures, Office Fittings, Utensils, &c.****ALL KINDS OF FIXTURES BOUGHT OR TAKEN IN EXCHANGE.****SHOW ROOMS AND OFFICES—****333 KINGSLAND ROAD.****FACTORIES—****2 DOWNHAM ROAD, KINGSLAND;****AND****WHITMORE ROAD, HOXTON, LONDON, N.**



W. H. BAILEY & SON,

16 OXFORD STREET, LONDON.
ESTABLISHED A.D. 1833.



FIRST PRIZE (SILVER MEDAL) FOR TRUSSES AWARDED BY THE
WORSHIPFUL COMPANY OF CUTLERS OF THE CITY OF LONDON, MAY 1879

FIG. 1.

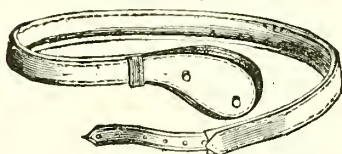


FIG. 4.

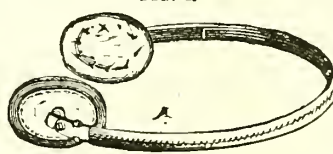
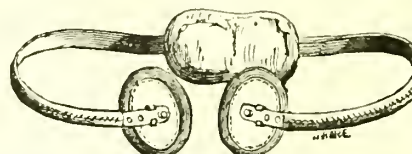


FIG. 5.



TRUSSES.

Circular Trusses, single, as Fig. 1, basil and chamois or basil and moleskin	per doz.	£1 1 0
Circular Trusses, double, basil and chamois or basil and moleskin	per doz.	1 14 0
" " " with extending backs	"	2 14 0
Salmon & Ody's Expired Patent, single, Fig. 4	"	1 10 0
" " " double, Fig. 5	"	3 0 0
Moo-Main Lever, single	each	0 8 0
" " double	"	0 13 6
Coles's Expired Patent, single	"	0 5 6
" " double	"	0 10 6
Scrotal Trusses, basil and chamois or moleskin, single	"	0 4 0
" " " double	"	0 7 0

SUSPENSORY BANDAGES.

No.			
1.	Cotton Bags and tape under-straps ..	per doz.	0 8 0
2.	Cotton Oxonian, with drawing-strings ..	"	0 10 0
3.	Silk Bags and tape under-straps ..	"	1 1 0
4.	Silk Oxonian, with drawing-strings ..	"	0 18 0
5.	" " Bags bound with elastic ..	"	1 4 0

SUSPENSORY BANDAGES—continued.

No.			
6.	Silk Oxonian, superior quality, bands of buff jean, with drawing-strings ..	per doz.	£1 4
7.	Silk Bags, to button on, with tape under-straps ..	"	1 1
8.	" " " under-straps to button ..	"	1 4

ELASTIC STOCKINGS, KNEE-CAPS, ETC.

Manufactured expressly for Export, and warranted to stand a hot climate better than any others in the Market.

	Silk.	Super. Silk.	Cotton.	Super. Cotton.
Stockings .. pair	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Knee-caps ..	0 9 0	0 13 6	0 5 3	0 6
Calf-pieces ..	0 6 0	0 9 6	0 3 6	0 5
Socks ..	0 6 8	0 9 0	0 4 0	0 5
Wristbands ..	0 5 0	0 7 6	0 3 3	0 4
Knee Stockings ..	0 2 0	—	0 1 6	0 2
Belts, to draw on .. each	0 15 0	1 3 0	0 8 9	0 11
	0 16 0	1 1 0	—	0 9

The above may be obtained direct from the Manufacturers, or from their Wholesale and Export Agent
Messrs. Barclay & Sons, 95 Farringdon Street.

MEDICINE CHESTS.

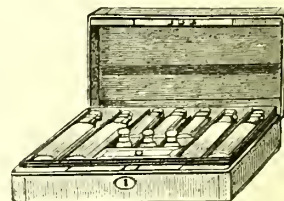
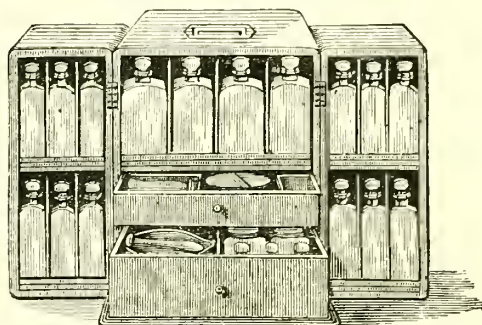
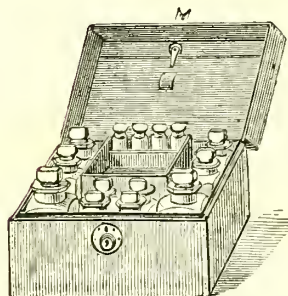
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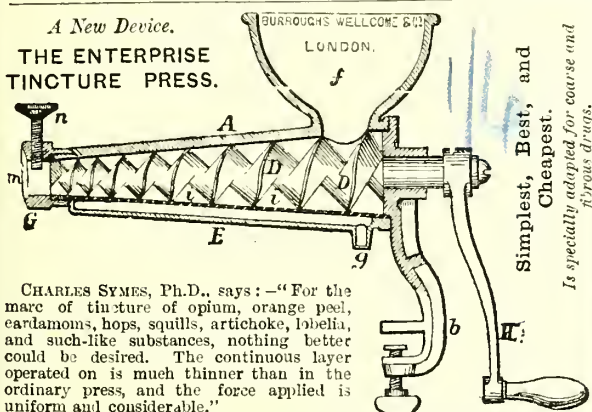
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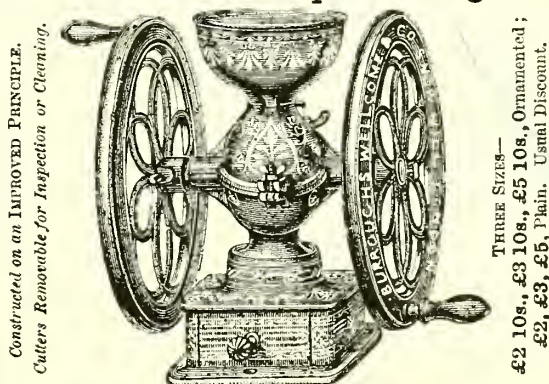
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See "CHEMIST AND DRUGGIST," December 15th, 1874.

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Dose, 1 drachm.

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The most powerful agent for the digestion of Fat and Farinaceous Foods.

These preparations are reliable and concentrated forms adapted for all the purposes for which Pancreatine and Pepsine are administered.

Dose, 1 drachm. (See *British Medical Journal*, Dec. 13, 1879, p. 265, &c.)

These Preparations are obtainable in any quantities of all Wholesale and Retail Chemists, &c.

PEPSINE, Saline Essence of.

The most powerful agent for the digestion of Meat, Milk, Eggs, etc.
May be taken with Food as a Sauce or Ketchup.

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A Combination of the whole of the Digestive Secretions—Pepsine, Pancreatine, Diastase, or Ptyalin, etc., forming a valuable remedy in the treatment of all forms of Dyspepsia, and Disease arising from imperfect nutrition. Dose, 3 to 5 grains.

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Dose—of the Liquor, minims 15 to 60; of the Vinum, 1 to 4 drachms, to be diluted. Supplied in any quantities required.

[1]

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General Post Office.

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Our circulation now regularly includes every member of
the Pharmaceutical Societies of Victoria and New South
Wales.



A Bill has just been introduced into the House of Lords
by the Duke of Richmond entitled the Sale and Use of
Poisons Bill, 1881, and was printed yesterday, July 14. It
extends several parts of the Pharmacy Act 1868, forbids the
sale of a scheduled poison to persons under 21, or to persons
representing themselves or known to be servants, under a
penalty of 10*l*. Whenever a poison is sold to a servant a
copy of the entry in the poison register must be posted to
the master. A false declaration of name, address, or the
purpose for which the poison is required renders the pur-
chaser liable to a fine of 5*l*. for the first, and 10*l*. for sub-
sequent offences. The poison register shall be open at all
reasonable hours to the inspection of any justice, constable,
or police officer, under a penalty of 10*l*. These provisions
are not to interfere with the business of apothecaries, of
members of the College of Veterinary Surgeons, nor with
the wholesale or patent medicine businesses. The following
poisons are to be added to Part I. of Schedule A of the

Pharmacy Act:—Hellebore, buttyr (*sic*) of antimony, oil of
vitriol, spirit of salts, nitric acid, and salts of copper. The
least indication of opposition will be sure to ruin the chances
of this Bill for this session at least.

The Veterinary Surgeons Bill, 1881, introduced into the
House of Lords by Lord Aberdare, resembles, *mutatis
mutandis*, the Pharmacy Acts. The Royal College of
Veterinary Surgeons takes much the same place as the
Pharmaceutical Society. No one not registered will be able
to recover fees for services rendered as a veterinary
surgeon, and an unregistered person using the title
veterinary surgeon, or any similar title, is liable to a penalty
of 20*l*. Persons who have been practising veterinary
surgery for five years before the passing of the Act will be
entitled to registration on payment of such fees as the
Royal College decides, but only in a separate class as
“existing practitioners,” and such registration gives no
rights to membership of the College. This Bill has not
reached the House of Commons, and may not become law
for some time.

The Pharmaceutical Council having applied for a hear-
ing to the Royal Commission on the Medical Acts, were
asked to indicate the purport of the evidence they wished to
offer. They have found it impossible to agree on any
subjects for submission to the Commission, and have there-
fore for the present withdrawn their application.

The Pharmaceutical Council occupied most of their July
meeting with a discussion on a scheme which Mr. Schacht
proposed to submit to the Royal Commission. The proposal
was not adopted by the Council.

The programme for the International Pharmaceutical
Congress has been prepared, and we give it on page 300. It
comprises a *conversazione*, a banquet, and an excursion on
the Thames, besides three days' sessions for papers and dis-
cussions.

The Society of Chemical Industry have held an inaugural
session in London lasting two days, under the presidency of
Professor Roscoe. Papers were read on “Noxious Gases
Legislation,” “Lager Beer,” “Mechanical Furnaces,”
“Gaseous Fuel,” and “Patent Laws.” The Society numbers
over 300 members.

The Chemists' Trade Association have been defeated in a
prosecution at Oxford. An oilman sold a packet of red pre-
cipitate, labelled with the name and address of a chemist of
another part of the town, and that chemist testified that he
rented a window of the shop and allowed the oilman 10 per
cent. on all his drugs and poisons. The magistrates accepted
that statement, but we understand that the Association have
instructed their solicitor to apply to the Court of Queen's
Bench with the view of obtaining a new trial.

A County Court Judge at Preston has non-suited a chemist
who sought to recover six guineas for laudanum supplied to
the wife of the defendant. The case seemed to be that the
husband had agreed to pay for laudanum for his wife, the
doctor having ordered it, but it was held that such an agree-
ment could not be understood to apply to such a quantity as
6 oz. almost daily.

Our correspondents at Smyrna give, on page 293, special
details respecting the opium crop of this season, which
promises to be unusually abundant.

We have in type a full report of the evidence submitted
to the Select Committee on Railway Rates by Mr. Spence,
of Manchester, in respect to the carriage of heavy chemicals,
but pressure on our space compels us to postpone its publica-
tion till next month.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

QUALITATIVE ANALYSIS.

A MIXTURE of salts will form the subject of the next exercise in qualitative analysis. The mixture is to be submitted to a thorough systematic examination designed to detect its constituents and to demonstrate the absence of all other substances. Students are required to send a complete report of the analysis. A list is to be given of the metals and acid radicles detected, distinguishing those which may be regarded as accidental impurities.

Applications will be received up to July 20, and portions of the mixture will be sent to applicants on the 25th.

Students' reports will be received up to August 15.

REPORTS.

The mixture of salts issued in May consisted of:—

	Parts
Barium carbonate	3
Strontium carbonate	1
Calcium carbonate	1
Magnesium carbonate	1

Iron and the sulphuric radicle were present as impurities.

The metals barium, strontium, and calcium form one of the common analytical groups, with magnesium as a subgroup. These metals are closely related in their properties. The nature of this relationship deserves some notice.

Organic chemistry would be completely unintelligible if it were not for the fact that the innumerable compounds of carbon may be so classified that every known compound has a definite place assigned to it, and compounds as yet unknown are indicated by blanks in the system that await filling up. In the homologous series of hydrocarbons known as the paraffins, and of which marsh gas is the lowest term, each member differs from that preceding it by one atom of carbon, and two of hydrogen. The four lowest members are gases at ordinary temperatures, the more complex of these being liquefiable. The fifth is a liquid of low boiling point, and each succeeding member exhibits a higher boiling-point as the number of carbon atoms increases. In chemical properties a corresponding gradation is observable, though not so easily traced, since chemical properties seldom admit of being expressed numerically. And so on throughout the whole range of organic chemistry, the properties of compounds are indicated by the position the compound occupies in the series to which it belongs. It is by no means improbable that a similar system of classification will eventually be found applicable to all the forms of matter with which inorganic chemistry deals. An important step has recently been made by showing that it is possible to adopt a system of classification which applies to all the elements, assigning a place to each with almost as great precision as if it were a member of the homologous series. We are indebted to the Russian chemist Mendelejeff for one of the most important advances made in this direction. The group of metals with which we are at present concerned afford a good illustration of the chief principles of Mendelejeff's classification. With the addition of the metals, glucinum, zinc, cadmium, and

mercury, and blank spaces for two unknown elements, they form one of the natural families, thus:—

	Atomic Weight
Glucinum	93
Magnesium	24
Calcium	40
Zinc	65
Strontium	87.5
Cadmium	112
Barium	137
Unknown element	—
Mercury	200
Unknown element	—

In this family all the members are dyads, that is, an atom of each takes the place of two atoms of hydrogen when substituted for the latter in a compound. Their oxides may be represented as consisting of a molecule of water in which the two atoms of hydrogen are replaced by one atom of the metal, and their hydrates as two molecules of water with half the hydrogen similarly replaced. And so on with their other compounds; each member of the series has a combining power equal to two atoms of hydrogen or other monad. The series is divisible into two groups, in which the properties of the different members exhibit a remarkable gradation, corresponding to the differences in the atomic weights. One group includes the first, third, fifth, seventh, and ninth—glucinum, calcium, strontium, barium, and mercury. The other group includes the intermediate members—magnesium, zinc, cadmium, and two elements not yet discovered. It is a notable feature of the scheme that it provides for future additions to the list of elements, and that one of the blanks in another family has already been filled up by the discovery of gallium. Of the five metals of the glucinum series the three which occupy the middle of the group decompose water at ordinary temperature, the metals are readily oxidised, and the oxides combine energetically with water, forming hydrates. Many of the salts are isomorphous—that is, similar salts of two different metals may form part of a single crystal in any proportion. A notable instance of this peculiarity occurs in the carbonates of barium, strontium, and calcium, which form isomorphous crystals after the trimetric system. It is interesting to observe that in the case of calcium carbonate not only does it crystallise after the trimetric system as the mineral calcite, it also forms hexagonal crystals as in the mineral aragonite. Now, while calcium exhibits a relationship, on the one hand, with barium and strontium, it shows, on the other hand, a relationship to the neighbouring members of the other series—magnesium and zinc, for the carbonates of these metals are isomorphous with aragonite. The hydrates of the metals of the glucinum group exhibit a solubility in water proportional to their atomic weights. Glucinum hydrate is insoluble, calcium slightly soluble, strontium comes next, and barium hydrate is the most soluble. The hydrates of mercury are imperfectly known. Several of the salts of these metals are the direct converse of the hydrates as regards their solubility. Of the sulphates, for example, that of glucinum is highly soluble in water, calcium sulphate dissolves in 400 parts of water, strontium sulphate in 7,000, and barium sulphate is one of the most insoluble salts known; mercuric sulphate is decomposed by water. The metals of the magnesium series have little or no action upon water; they do not oxidise readily, nor do their oxides combine directly with water, except in the case of magnesium, which combines slowly. Isomorphism is common in the salts of magnesium and zinc, and in many cases in those of cadmium as well. Indeed, most of the compounds of cadmium bear a striking resemblance to the corresponding compounds of zinc. In other natural families of the elements, the monad triads, &c., corresponding relationships and similar gradations in properties are repeated, hence the classification assumes a periodic character, and the fundamental principle is appropriately termed the Periodic Law. The groups in which the metals are divided for analytical purposes do not correspond to those of the periodic arrangement, though, in the present case, the members of an analytical group may all be included in the one natural family.

The chief points to be attended to in an analysis are referred to in our remarks to correspondents.

PRIZES.

The First Prize for the best analysis is awarded to F. H. ALCOCK, 7 Regent Street, Clifton, Bristol.

The Second Prize is awarded to FRANK W. RANDALL, 146 High Street, Southampton.

Marks Awarded for Analyses.

F. H. Alcock (first prize)	..	..	..	..	98
F. W. Randall (second prize)	..	..	..	..	95
Dolomite	..	..	..	..	93
Antrim	..	..	..	..	93
W. D. B.	..	..	..	..	90
J. F. Croshaw	..	..	..	..	80
F. B. Wride	..	..	..	..	78
Ellisiana	..	..	..	..	75
W. Miller	..	..	..	..	75
R. W. H.	..	..	..	..	75
Prospect	..	..	..	..	75
Lithium	..	..	..	..	70
J. Wood	..	..	..	..	70
Niobium	..	..	..	..	65
R. J. Macdermott	..	..	..	..	60
H. C. H.	..	..	..	..	50
G. J. H.	..	..	..	..	50
Dum Spiro Spero	..	..	..	..	0
Boz	..	..	..	..	0

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

*. All Communications should include the names and addresses of the writers.

F. H. Alcock.—Your results are clearly and definitely expressed, and it is evident that your analysis was executed with intelligence and care.

Dolomite.—You made a close approximation to the relative quantities. We do not ask students to do quantitative work, but it is well to cultivate the power of estimating the quantities represented by the precipitates obtained.

J. F. Croshaw.—To precipitate strontium by means of calcium sulphate the reagent ought to be a concentrated solution, and the liquid to be tested should not contain hydrochloric or nitric acid; a moderate excess of free acetic acid is admissible. It is essential that the reagent be added in quantity. Suppose the solution to be examined measures 10 cc., and that 0.5 cc. of a concentrated solution of calcium sulphate is added, there will now be enough sulphuric acid present to form 0.0015 gramme of strontium sulphate, but as there is just enough water present to dissolve this quantity no precipitate will appear. Double the quantity of the reagent and a precipitate will be formed, unless the quantity of strontium present is too minute.

F. B. Wride.—Magnesium ammonium phosphate separates best from a cold solution. There is nothing gained by warming it.

Ellisiana.—It will repay you to experiment on the separation of strontium from barium and calcium. You will find either that your sulphuric acid is too dilute, or that you did not use enough of it.

J. Wood.—You did not employ enough acid when endeavouring to dissolve the powder; with a sufficiency of dilute hydrochloric acid an almost clear solution was obtained immediately. Unless the acid solution was quite freed from carbonic anhydride by boiling a precipitate of carbonates would be formed on the addition of ammonia and ammonium sulphide, and would lead to error.

Niobium.—If your solution had become dilute the calcium oxalate precipitate might not appear immediately. With ordinary care minute quantities of calcium may be detected as oxalate.

H. C. H.—Your paper conveys the impression that your precipitates formed slowly and your conclusions quickly.

G. J. H.—It is a safe plan to concentrate the solution to be examined for magnesium, as the characteristic precipitates take a long time to crystallise from a dilute solution.

Dum Spiro Spero.—You did not make a systematic analysis; random testing does not prove much.

A RHYME WITHOUT A REASON. (By an eminent Allopathist.)

I do not like you, Dr. Kidd;
Yet why I don't and never did,
Can't say, but I will bet a "quid"
I do not like you, Dr. Kidd.—Punch.

Pharmacalia.

THE VALUATION OF POTABLE WATERS.

AN elaborate paper was read (June 1) by Mr. G. W. Wigner before the Society of Public Analysts on "The Valuation of the Relative Impurities in Potable Waters." An attempt was made in this communication not so much to establish certain methods of investigation as to aim at greater uniformity in the expression of opinion on the results obtained. The purpose of every analysis of a potable water was to ascertain its purity and suitability for domestic use, but where almost identical constituents might be determined by separate analysts, the deductions drawn from the presence or amount of such constituents were by no means always in accordance. The text deciphered was the same; the commentary varied. To obviate this undesirable discrepancy of interpretation a scheme which has been under consideration during the past three years was brought forward in an amended form for the systematic valuation of impurities, based upon the plan of giving a value to every constituent found in a water. Some six months ago the Water Committee of the Society decided to give the scale a temporary trial on the analyses of public water supplies made by the members for publication, and to bring the whole subject forward for discussion. Certain values having been altered, the original value of 35, proposed as the limit of a first class water, was no longer tenable. Four axioms might be taken as starting-points in order to test the proposed scale. First: every constituent found in the course of an ordinary water analysis must have a certain value or importance corresponding to the proportion in which it is found, no matter how small that proportion may be. Though chlorine in chlorides, or nitrogen in nitrates, might exist to so slight an extent as to be ordinarily ignored, it was more sound and logical to estimate their value as forming part of a total rather than to consider the determinations as having no importance. Second: any constituent of a water found in undue or excessive proportion should condemn such water for domestic use. Third: there must be a certain minimum valuation approximating to that of the purest public supplies which should be passed as representing the constituents naturally occurring in the best waters. Instead of allowing a certain proportion of each constituent individually before the valuation, it was more satisfactory to assume that, if the valuation of all the constituents was less than, say, 15, the water should be classed as of exceptional purity; it might be desirable to make a deduction corresponding to this figure in fixing the arbitrary limits between waters of different classes. Fourth: having deducted or allowed for the amount of mineral and organic constituents found in the best waters, the residual figure would represent the extraneous impurity, which would really be the measure of the excess value of all the constituents determined, over what is present in the purest water supplies. This difference would clearly indicate the variations which take place from week to week, and month to month, in the character of any one supply. But it was only by looking carefully at the details of the valuation-scale that it was possible to see whether it would act with equal certainty on supplies drawn from different sources, and on water stored or filtered in different ways. The scale provisionally adopted by the Water Committee was based on their own scheme of analysis, all reference being omitted to values to be given to organic carbon and nitrogen, and to the detailed mineral analysis; nor was reference made to any value for the presence of heavy metals.

Some such allowance as the last was necessary, and, when organic carbon and nitrogen were determined, definite values should be given to them in substitution for the values belonging to the albuminoid ammonia. The scale, as far as the purely chemical results were concerned, was as follows:—Chlorine, .50 grain per gallon, 1; phosphoric acid, traces 2; ditto, heavy traces, 4; ditto, very heavy traces, 8. The value of 1 was assigned to each of the following:—Nitrogen in nitrates, .10 grain per gallon; ammonia, free, .005; ditto, albuminoid, .001; oxygen absorbed in two minutes, .002; ditto in four hours, .010; hardness before and after boiling (added together), 5°. Total solid matter, 5 grains per gallon. If any single value exceeds 10 the excess over 10 is to be doubled, and included in the addition. Thus far the scale was convenient and easy of application, but as regards physical tests, such as appearance, smell, and microscopical examination, its use was attended with more difficulty. These suggestions were illustrated by a series of water analyses, worked out and tabulated, with a running comment on the results. The broad principle of the valuation was shown to be correct, and contaminations were distinctly indicated. Valued in this manner the London water, as supplied by the different companies, was considered as being of first-class quality—an idea confirmed by the generally satisfactory character of the tables of mortality and the general health of the population, notwithstanding the great neglect of proper sanitary precautions in the house cisterns of the metropolis. These waters, therefore, might give some notion of a definite limit or standard by which to define a first-class water: arguing from an average of result the standard would probably be 40. From the analyses of exceedingly pure waters a new feature might be added to the valuation-scale. The waters (sandstone) obtained from Whitehaven and Derby in March and May had respectively a value of 9 and 12. A limit could thus be obtained for what might be called unavoidable impurity; roughly speaking, the degree of contamination of the most pure public supplies, to express which the figure 15 might probably be adopted. Assuming therefore, said Mr. Wigner, that 40 was adopted as the limit of a first-class water, and 15 as that of water of exceptional purity, it would be probable that 65 was a fair limit for a second-class water, since it will allow for twice as much extraneous contamination. Some slight amendments of the chemical valuations were suggested, and an amplified scale as regarded the physical tests. It was proposed to give the same value to oxygen absorbed in 15 minutes as had been previously taken by that absorbed in 2 minutes, and the maximum valuation of 10 for the microscopical examination was thought too low. Mr. Wigner concluded by moving that a water valuation-scale, analogous to that which had been suggested, be recommended by the Society for the adoption of its members. A long discussion ensued, and the matter was adjourned until the first available meeting in January next. The point seemed to be whether there should or should not be a fixed definite scale. Granting that such a scale was considered desirable to be adopted, further discussion should determine the separate valuations proposed.

MEDICAL HEROISM.

An example of heroic courage has just been given by a member of the medical profession. So striking an illustration of self-devotion as that displayed by Dr. David Lowson, of Huddersfield, should not be passed unnoticed in even a purely pharmaceutical record. A child was suffering from diphtheria, and was in so dangerous a condition that tracheotomy had to be performed as the one chance of recovery. The operation was to a certain point successful,

but it was necessary both to remove the fungoid growth caused by exudation and to promote artificial respiration. Now the doctor, perfectly aware of the horribly infectious character of the disease, set himself to save life at all hazards. He accordingly opened the windpipe and so gave temporary relief. He then put his lips to the orifice, and with his own breath sucked out the poisonous matter and induced a regular action of the lungs. Unhappily the desperate measures were not ultimately crowned with success, and the child died. The doctor himself became a victim to his self-sacrifice; being seized with the same disease in its most virulent form he was incapacitated from the exercise of his profession, and compelled to retire from practice. In public recognition of the deed Her Majesty has conferred on Dr. Lowson the Albert Medal of the first class, an honour which has been splendidly deserved. The courage is shown by fearless conduct in presence of imminent and great peril, and in the annals of such brave deeds the name of David Lowson will not easily be forgotten.

THE SOCIETY OF ARTS.

The Society of Arts is jubilant: at the annual general meeting, held on June 29, it was shown that there was an increase of 47 members, making in all 3,302. Thirty-seven institutions subscribe to the Society from their own funds, and the floating debt, which has so long encumbered its operations, has been swept away. The well-known Bacon pictures, which hang in the great room, have been cleaned successfully, and appear uninjured, though they have been exhibited for nearly 100 years. On the other hand, a personal loss sustained by the Society has been greatly mitigated. Several notable names have been removed from the list of deaths, amongst whom are Frank Buckland, not himself a member, but a valuable promoter of the work of the Society; Mr. Mechi, who devoted himself to the advancement of scientific agriculture, and who bore his late financial calamities with exemplary resignation; Dr. Stenhouse, whose researches are well known in pharmaceutical circles; V. Arnot, who made the manufacture of paper his special subject; Lord Caithness, who was the first to listen to the sounds of the telephone devised by Professor Bell; the late Arthur Rigg, indefatigable in the cause of technical education; and Professor Tennant, that strange-looking, somewhat eccentric personage, who flitted by the neighbourhood of King's College, save when he was to be found at John Street, Adelphi, always accompanied by the geological specimens which seemed part of his existence. Of the continuous good work effected by the Society of Arts it has become unnecessary to speak. A scene of much excitement was witnessed when Professor Graham Bell brought and explained his photophone. The accommodation was totally insufficient, and those who were excluded expressed their sentiments with a warmth equal to that of dissatisfaction. When Mr. Edward Whymper described his ascent of Chimborazo and Cotopaxi the Council, warned by experience, obtained the loan of the lecture theatre at St. James's Kensington. The applications of electricity were described in a series of Cantor lectures, also by Mr. Preece and Mr. Alexander Siemens. One day we may have our streets lighted and our railway carriages driven by this subtle agent. Briefly, it may be said that whenever abstract science is shown to bear practically on some great industry, a large audience listened to the demonstration. The examination system, as altered, has not been successful; in some departments there has been a woeful falling-off in the number of candidates. This diminution we cannot look upon as other than a sign of returning common sense. We are being examined now into little bits, and speedily no man, worth

or child, to which add infant, will have a whole idea left. There has been another improvement in the discussions at the ordinary meetings after the reading of a paper. Who has not gazed despairingly at the clock which hangs over the Royal picture, and wondered when the inevitable two or three who discuss everything, from Mactear's furnace down to food and cookery, would find time to end? A list was once drawn up of the various topics on which a respectable old gentleman held forth, to the discomfort of the respective lecturers. Speech is silver, so the proverb says, and silence gold, and we are glad that the nobler metal has begun to be appreciated.

HOLIDAY TIME.

Once more the glad summer time is on us, and we are nearing the season when the pharmacist begins to look forward to his annual holiday. No man is more fully entitled to enjoy a brief respite from his toils than the laborious chemist and druggist. He has all the anxieties of a profession weighted with heavy responsibilities, as well as the burden of a trade which exacts unremitted personal attention. The barrister has his full tide of work, but his occupation is relieved with much social relaxation, and the same may be said of those engaged in large commercial undertakings. What presses so severely on the druggist is the multiplicity and the very smallness of his occupations from which he is never free, and which demand his constant care. In what kind of recreation shall he seek rest? If scientifically disposed we say, without hesitation, let him try York. There he will find a minster which is the glory of England; an ancient city rich in the memorials of the past, and a hearty welcome from the British Pharmaceutical Conference. Should he object to wander to the north, London, in the month of August, invites him to an International Pharmaceutical Congress. Should neither of these tempt him, let him be advised for a while to send pharmacy adrift, and to forget his troubles under the shadow of green trees or at the seaside. By no means let him ignore the healthful influence of change. For most it is desirable, for him essential. The complaining spirit of the pharmacist is due to the petty vexations by which he is surrounded. Fresh air, new scenes and associations will do him a wonderful amount of good, which in the long interval which must elapse before the experiment is repeated, will prove his best stock-in-trade.

The Pharmaceutical Council.

JULY 6, 1881.

MR. T. GREENISH (President), and Mr. G. F. Schacht (Vice-President).

All the members were present with the exception of Mr. Churchill.

After the minutes of the last meeting had been read the Vice-President expressed his thanks for the honour of re-election as such, in his absence last month.

Initiated by Mr. Butt, some discussion next arose as to the Committees. The Pharmacy Act Amendment Committee was renamed the Law Parliamentary Committee, after several suggestions had been offered as to the title of the latter. It was proposed to leave out the word "Law," and it was also proposed to place the word "Parliamentary" first, but finally the above title was confirmed.

A letter was read from the Privy Council, accepting the examiners appointed by the Council last month.

Letters were read from Messrs. Sandford and Hills, acknowledging and thanking the Council for the vote in reference to themselves passed last month.

THE ELECTION OF MEMBERS

was next proceeded with. A list of the superintendents of examinations for the Bell Scholarship and other prizes was submitted and approved, and Messrs. Corder and Ekin were selected to conduct the examination for the Council prizes.

The report of the

FINANCE COMMITTEE

passed without discussion, and consisted merely of records of the ordinary expenditure.

The Benevolent Fund Committee reported numerous applications for assistance, and recommended grants to four persons of sums amounting in all to 50*l*.

Medical certificates were submitted by three candidates who had entered for the recent minor examination and had failed to present themselves, and were regarded by the Council as sufficient excuse, and their fines were remitted.

THE LIBRARY, MUSEUM, AND LABORATORY COMMITTEE

recommended an honorarium of 10 guineas to Mr. Holmes, the curator of the Museum, for extra services rendered in connection with the recent exhibition. The Committee submitted the proposed list of local secretaries for the year. The professors had reported satisfactorily in regard to their several classes. The report was adopted.

The Pharmacy Act Amendment Committee reported that they had considered

THE PHARMACY LAW OF JAMAICA,

which had been submitted by the Colonial Secretary to the Council, and, in accordance with suggestions made by Mr. Flux, had submitted to the Colonial Office a few criticisms thereon. Lord Kimberley had requested that his thanks should be conveyed to the Council for their observations, and had asked for some further elucidation of one or two points which had also been given him. Subsequently, in accordance with the suggestion of Mr. Carteighe, endorsed by the President, it was resolved that the correspondence with the Government on this subject ought not to be published in full.

THE ROYAL COMMISSION ON THE MEDICAL ACTS.

The Pharmacy Act Amendment Committee also reported that, on June 20, a letter had been written by the Secretary, asking for permission for the Pharmaceutical Society to be heard before the Royal Commission by the evidence of a few representatives of pharmacy. A reply had been sent by the Secretary of the Royal Commission on June 21, acknowledging the application, and asking to be furnished with a written statement explaining the purport of the evidence which the Pharmaceutical Society would propose to offer. When the Committee met to draft a reply to this letter the Vice-President had submitted a scheme, which after discussion had been withdrawn in order to be considered by the Council.

Mr. RADLEY asked whether any steps had been taken by the Committee in reference to the Medical Acts Amendment Bill to which he had drawn the attention of the Council at the March meeting of the Council, that Bill proposing to repeal the exemption clause in the Apothecaries' Act.

Mr. RICHARDSON: Has not that Bill been withdrawn?

Mr. CARTEIGHE said the Committee were now considering what they should formulate to bring before the Royal Commission.

Mr. RADLEY would be satisfied if he was assured that action would be taken.

Mr. CARTEIGHE said there was a considerable difficulty in this matter. They did not see how they could go before the Commission to ask them for a certain power, when, as they held, the law was already in their favour.

Mr. HAMPSON said that on the Committee he did not quite share the views of some of his colleagues. The case stood thus. Full power had been given by the Council to the Committee to formulate the subjects on which they should apply to be heard by the Commission. That resolution seemed to cover everything, but when they came to apply it they found themselves in some difficulty. It was quite clear that one of the subjects was to be the right of pharmacists to share in the work of revision of the Pharma-

copœia, but they were not so clear on the subject of counter-practice, and he thought a resolution of the Council, making this a part of the instructions to the Committee would strengthen their hands. He had no wish to offend the medical profession, and he saw that it would need to be delicately treated, but he thought they might fairly ask that the rights which they had always enjoyed should not be interfered with. He moved a resolution giving instructions to the Committee in this sense.

The VICE-PRESIDENT said that he had given notice of a motion, stating that the instructions to the Committee should be so-and-so, and he claimed that his motion ought to have precedence over any similar one brought forward suddenly.

Mr. RADLEY seconded Mr. Hampson's motion, and the discussion again threatened to become general in reference to counter practice, but Mr. Schacht again pressed his claim for precedence, and the President put the motion for the adoption of the Committee's report, which was carried, and the discussion as to the subjects on which the Society should ask to submit evidence was understood to stand over until Mr. Schacht's motion came forward.

THE INTERNATIONAL PHARMACEUTICAL CONGRESS.

The Committee charged with the arrangements for the Pharmaceutical Congress reported the progress made and their plans for interpreting at the meeting. They had also made arrangements with the South Eastern and the London, Chatham, and Dover Railways for the conveyance of Continental passengers from Calais, Boulogne, or Flushing at single rates for return tickets. Of the 393 foreign pharmacists invited, 42 had accepted, 18 were doubtful, 72 had declined, and the rest had not replied. In reply to Mr. Andrews, the PRESIDENT said they expected about 100 visitors in all.

Mr. WILLIAMS asked if the President could communicate anything further of interest in reference to the Congress.

The PRESIDENT said there was nothing particular to be said, except that they had so far every reason to expect that the Congress would be quite successful. A programme would shortly be published, which would give full information. He might mention that the next meeting of Council would occur while the Congress was in session. It was intended to call the Council meeting, and then adjourn for a week.

THE GENERAL PURPOSES COMMITTEE'S REPORT

was taken as usual in Committee.

A PORTRAIT OF MR. PETER SQUIRE

was shown in the room, and a letter from that gentleman to the President was read in reference to it. It had been taken for Dr. Acland. Mr. Squire said he should be happy to present any member of the Congress with an autotype copy.

The VICE-PRESIDENT asked if it would be too much to ask that the Society might retain the original likeness, or have an exact replica thereof.

The PRESIDENT undertook to see Mr. Squire on the subject.

Mr. BOTTLE said that while they were on the subject of pharmaceutical worthies he would like to ask if it would not be possible for the Society to have a portrait of Mr. Hills for the room.

This suggestion met with general approval, and the President undertook to see Mr. Hills also on the subject.

THE APPOINTMENT OF PROFESSORS.

The appointments of Professors Redwood, Bentley, and Atfield to their respective chairs were then severally proposed and seconded, and after a discussion in Committee were carried unanimously.

THE ASSISTANT SECRETARY IN SCOTLAND.

A letter was read from Mr. Stenhouse announcing his desire to resign his post within three months.

The resignation was accepted, and an advertisement for a successor was ordered to be prepared and published.

THE ROYAL COMMISSION.

The VICE-PRESIDENT then, in accordance with notice, proposed—

That the evidence to be given before the Medical Acts Commission be in accordance with the propositions set forth in the following circular [which, in printed form, had been circulated among the members of Council]:—

If requested to give evidence before the Royal Medical Acts Commission, I should like to give expression to the following views:—

I think it would be of advantage to medical science and to medical practice if a more complete recognition were accorded to the fact that *pharmacy constitutes an integral portion of the medical art.*

The relations that at present connect pharmacy with medicine are far too vague.

Although pharmaceutical subjects are to some extent included in the curriculum of the student of medicine, and thus a theoretical union is admitted, those subjects are allowed to occupy an altogether secondary place in his professional training, and in their subsequent practical application, are relegated to another body of men who (as far as he has any control in the matter) may or may not be qualified to undertake them.

The results are, on the one side, an imperfect appreciation of the value of pharmaceutical subjects, and on the other side, from the lack of that appreciation, an indifference to excel.

Both these results tend to the prejudice of the art of medicine and to check its scientific progress.

The history of social development seems undoubtedly to prove the necessity of constant subdivision of labour, and the desirability of one set of men being exclusively employed in the practice of pharmacy, as distinct from the operations of surgery or the treatment of disease, may be admitted, but the complete appreciation of the value of each department of work by the others appears necessary for the ample fulfilment of any one, the several portions are mutually dependent, and nothing but loss to the general cause can result from ignoring their connection.

I think, therefore, that any attempt to settle the laws that shall for the future determine the relations between the art of medicine and the public should include the subject of pharmacy, and that one of the chief objects of those laws should be the drawing together into the closest possible connection all departments of that great art.

If invited to express more in detail my ideas as to the process by which this closer union could be effected, I would endeavour to explain them thus:—

The General Medical Council might be constituted to include (a) responsible laymen (some Minister of State, &c.); (b) Doctors of Medicine and Masters in Surgery; (c) Bachelors of Medicine; and (d) Bachelors of Pharmacy—the last to be presently defined.

A portion of the duty of this Council would consist in laying down a curriculum of study and a standard of qualification for students in each department of medicine.

It might probably indicate that one and all should commence with a certain degree in Arts.

Also that one and all should attain a certain proficiency in the three preliminary sciences, namely, Chemistry, Botany, and Materia Medica.

That certain other subjects should be also studied and worked at by the student in pharmacy, namely, prescriptions, dispensing, and pharmacy, and for a definite period of time, viz., three years.

And that another group of subjects, viz., anatomy, physiology, surgery, medicine, &c., be undertaken by the student of medicine for a period of, say, five years.

And that some further studies and practice be undertaken by those who aim for distinction and the highest degrees in medicine.

It might also be portion of the duty of the Medical Council to approve the appointment of all Boards of Examiners in each department of Medical examination, limiting the choice of Examiners in the preliminary sciences to men of established reputation for their special knowledge and qualifications for such work, and for the subsequent professional and technical subjects, to men who had themselves passed the ordeal with distinction and proved their qualifications for the duty.

The Council or certain other corporations should then be empowered to confer upon those who passed these examinations the respective titles of Bachelor of Pharmacy, Bachelor of Medicine, Doctor of Medicine, Masters in Surgery, &c.

And the law should provide that none but Bachelors of Pharmacy should have a right to dispense the prescriptions of registered medical men, or to sell poisons.

And none but Bachelors and Doctors of Medicine should have the right to visit patients for the treatment of disease.

It would also be portion of the duty of the Medical Council from time to time to revise existing Pharmacopœias, and generally to control all that concerns medicine.

Care would of course be taken to secure the rights of all existing registered pharmacists, and until sufficient numbers of Bachelors of Pharmacy had been created, the existing order of pharmaceutical chemists would be deemed their representatives.

GRAPHIC REPRODUCTION OF THE ABOVE.

The General Medical Council to consist of—

- x* number of responsible Laymen, *e.g.*, Ministers of State, etc.,
- x* number of Doctors of Medicine or Masters of Surgery,
- x* number of Bachelors of Medicine,
- x* number of Bachelors of Pharmacy,

Part of whose duty shall be to approve examiners for each department of medicine, thus:—

Boards of examiners from the registered lists of—

Experts in the respective sciences.	Bachelors of Pharmacy.	Doctors or Bachelors of Medicine or Masters in Surgery.	Doctors or Bachelors of Medicine or Masters in Surgery.
Three years in all.		Seven years in all.	
Chemistry, Botany, Materia Medica.	Prescriptions, Dispensing, Pharmacy, 3 years pupillage in a registered pharmacy.	Anatomy, Physiology, Surgery, Medicine, etc., etc., <i>x</i> years' hospital or other practice.	etc., etc., <i>x</i> years' practice.
Bachelor of Pharmacy.	Bachelors of Medicine.	Doctors of Medicine.	
Sole legal right to dispense the prescriptions of M.D.'s and M.B.'s, and to sell poisons.	Sole legal right to visit patients for the treatment of disease.		

A Student in Medicine or Pharmacy shall take a degree in Arts of Standard *x* before commencing his professional studies.

Doubtless whatever report is ultimately made by the Commission its recommendations will include certain changes in the existing organisations of medical instruction and registration, and it is to be supposed that those who now represent those organisations will be content to withhold special claims for the sake of the general good.

So in the department of pharmacy it may be supposed that those who represent the important organisation, the Pharmaceutical Society, will be content to adopt changes that may appear organic, provided they are shown to point distinctly to the advance of pharmacy and to the benefit of future pharmacists.

I think, however, the changes would be more functional than organic.

Even, if by the adoption of some such scheme as the above, a portion of the control of the curriculum and of the examinations passes to a more broadly constituted body, there would still remain the same *raison d'être* for the Society, whilst the examinations themselves and the titles that followed them would receive a large accession of dignity and be much better understood by the public and appreciated by the rest of the profession.

And the association of the representatives of pharmacy with those of medicine and Government in the Medical Council could not fail to promote a fuller sense of responsibility and a higher ambition for excellence.

The VICE-PRESIDENT said he felt fully the responsibility of making this proposal to the Council, but he was at the same time so strongly of opinion that some action of this sort would have to be taken that he did not hesitate to undertake the duty. In the Committee the previous week it had been intimated that the scheme had been brought forward with something like suddenness. He might parallel it by referring to the events of the last few hours. Some might consider that the storm of the previous night had burst upon them as a phenomenon of suddenness, but it was only one of a series of events each of which caused the succession of the next, so that what might have appeared sudden last week was, he considered, as nearly inevitable in the course of pharmacy as was the storm in the order of the universe. The current of antecedent phenomena he might briefly run through as they appeared to him. There was, as they were aware, the general feeling of dissatisfaction prevalent about the time when Jacob Bell first endeavoured to organise pharmacy; then there was the attempt to reform from the outside, which appeared as Mr. Hawes' Bill; this was followed by the more successful attempts from within, culminating in the formation of the Pharmaceutical Society; the subsequent events were the recognition of the Society by Royal Charter; the two Acts of Parliament which were intended to provide that those who took upon

themselves the duties of pharmacists should be competent to discharge those duties; the utter breakdown of those Acts, as shown by the decisions of three out of four courts of law; the determination to try to obtain an amendment of the Acts; the prolonged labours with that object; the refusal of the Government to assist them; the resolution of the Government to appoint a Royal Commission to inquire into the Medical Acts; the Pharmaceutical Council's application to be heard by that Commission; the request to be furnished with the subjects on which it was proposed to give evidence; and lastly, the necessity for some reply, and he bracketed with this the observation, the splendid opportunity thus afforded them. He repeated that the Acts at present in existence had admittedly failed to provide guarantees to the public that persons professing pharmacy were properly competent. Their efforts to get an amendment of the Act had also failed.

Mr. HAMPSON: No.

The VICE-PRESIDENT was, perhaps, not so sanguine as Mr. Hampson, but he reminded the Council that the Lord President had refused to undertake their Bill as a Government measure, and though he had agreed to see them on the matter, yet his first reply had committed him to the course of declining to act on their behalf. They had, in fact, arrived at a deadlock. They could not carry out the objects of their Acts without further legislation, and this they could not get. In pharmaceutical legislation there were three interests to protect and to be considered. There were the interests of individual members of the Pharmaceutical Society, the interests of pharmacy as a science, as indicated by the opening words of their charter, and the interests of the public. All these interests were merged in that deadlock. It is to the advantage both of the public and of medical science that a new start should be made, and, in his opinion, the present was, what the French call, one of the "supreme moments" in the history of pharmacy. The mistake of the past, or rather, he would say, what would be a mistake now, for what was right in the past might be wrong in the present or in the future, was to act too much alone. What we might call independence might become isolation. All their efforts to promote pharmacy or the public interests were regarded as attempts to promote class interests. They were never credited with doing an unselfish action. Whenever they wished to advance the interests of the public, the cry of trades unionism was flaunted before them. The only chance for their arguments was that similar ones should come simultaneously from others. If they could persuade this Royal Commission that the claims of pharmacy were really in harmony with the interests of the public they would accomplish great things for pharmacy, and would get the co-operation of a most important body. That Commission included men who could not take a narrow view of things. Such an opportunity might never occur again. He did not wish to discourage the carefulness of their interests as manifested by the motion of Mr. Radley, but he thought they might do far better if they could get an opportunity to have representatives of pharmacy sitting side by side with the representatives of medicine on a governing board. He did not press the details of his scheme, but he asked gentlemen to affirm the principle, and he believed it deserved their candid and earnest consideration.

Mr. CARTEIGHE seconded the motion, but would reserve any remarks he might wish to make until later.

An objection to this course from Mr. Woolley was overruled by the President.

This point being settled, speeches followed from all the remaining 17 members of Council present (Mr. Richardson had left), all more or less adverse to the Vice-President's scheme, though nearly all commenced their remarks with warm compliments to the propounder of it.

Mr. HAMPSON opened the criticisms. Any proposal from Mr. Schacht, he said, deserved intelligent attention; but the proposal of this scheme came upon him like a thunder-clap, in the Committee. The Committee had been entrusted with large powers no doubt, but he considered that it had been appointed for quite another purpose than to carry out such a scheme as this. Mr. Schacht had illustrated his argument by reference to the recent storm. He thought the comet might be more aptly chosen. Mr. Schacht proposed to travel on quite other lines than the Committee had to work upon.

which, latter, he believed, were the right lines. The Pharmaceutical Society had been founded to check the attacks of medical men, and had always been jealous of its independence. He for one was not ready to throw the control of their affairs entirely into the hands of the Medical Council. for that was what the proposal amounted to. What would be their voting power in the proposed council? Two or three, perhaps, against 20 or 30. The efforts of the Society had not broken down.

The VICE-PRESIDENT: Do not misquote me; I said that the two Acts of Parliament had broken down.

Mr. HAMFSON did not think this was the case. They had secured the principle that every pharmacist must be registered, and that was a great deal. He saw no sufficient reason for despair, which was a most unhealthy condition of mind. They could do nothing if they despaired. They could not go to the Royal Commission and tell them that they must arrange everything *de novo* on their particular lines. What they had to do was to try to get their Bill passed, and with pertinacity, he believed, they would get it passed, although the Government had for the present declined to take it up. They knew what they wanted, and it was a great deal to get so far. But by bringing such a scheme as this forward they were injuring their chances, and he thought it most unfortunate that the Vice-President of the Society should have done so at this juncture.

Mr. SAVAGE was obliged to Mr. Schacht for his proposal, which must have taken a great deal of time and trouble, but he thought the Royal Commission would only allow them to say what they had to say about pharmacy.

Mr. BOTTLE, while indebted to Mr. Schacht for his labours, was entirely opposed to the proposal. He did not see that they were at a deadlock, and the isolation spoken of he thought was something to be proud of. What prospect had they of getting all the dispensing of the country as suggested? If they were sure of it the case might be different, but he thought the Council had no authority to take such a revolutionary step as was suggested.

Mr. WILLIAMS spoke to the same effect and was criticising some of the features of the scheme, when the VICE-PRESIDENT remarked that the details were not essential. Mr. WILLIAMS rejoined that it was the details on which the scheme depended. If it could be shown that pharmacists would get all the dispensing it might be worth while to sacrifice the Society.

Mr. ATKINS, while joining in the tribute of admiration for the paper and expressing the hope that they would never repress the independent thought of such men as the Vice-President, suggested that he might have arranged his scheme during his recent holiday in Germany, as it seemed to have originated from that region of metaphysical theory. He did not think the Society had failed in the material sent out, and he did not think Mr. Schacht implied that they had; but he would like to have in a few words the principle of the scheme which Mr. Schacht wished to carry. He perfectly agreed in the statement that pharmacy was an integral part of medical science, but he did not wish that medical men should have control over pharmaceutical education. He did not wish that the Society should be effaced, though he would desire to work co-ordinately with the medical profession. He did not think that medical men would allow them to make alterations in their system of granting diplomas and government. He would approach the medical profession with every respect but with perfect independence. There was much to admire in the scheme, and some parts of it might become the practical truth of the future, but he regarded it as too vast and too revolutionary for the present.

Mr. FRAZER did not even agree with the text from which Mr. Schacht preached, and from which he drew so many lessons. He likened pharmacists and their claim to take part in the revision of the pharmacopœia to the manufacturers of gunpowder, possibly demanding that they should share with General Roberts or Sir Garnet Wolseley in the direction of the operations of a war. (Laughter and cheers.)

Mr. RADLEY thought if the scheme had come from medical men they would all oppose it. He thought they should not abandon the position they had fought so hard to obtain.

Mr. GOSTLING, while thankfully appreciating Mr. Schacht's contribution, must vote against his scheme. He

would think it wrong to give up their present position for the sake of the infinitesimal advantage they might gain.

Mr. SYMES did not understand Mr. Schacht to argue that the Society had failed in the past, but he understood from him that they had come to a deadlock, and that they could not go further without some revolutionary measure of this kind. That whatever efforts they now made for the advancement of pharmacy resulted rather in failure than in success. He thought they were far from a deadlock, far from standing still. He still hoped that ultimately the Government would assist them. It was a serious matter for a Government to take up a measure which was sure to be opposed. The medical body was no doubt more powerful than themselves, but he had not found them more interested in their welfare than they themselves. And the friends they went to in difficulties ought to be those who had the will as well as the power to help them. Their aim had always been towards promoting a division of labour, and, as they went on, they must expect to come to crises and to meet with rebuffs, but he hoped they might still look for successes in the future.

Mr. WOOLLEY had at first regarded Mr. Schacht's paper as a very able contribution to the amendment of the Pharmacy Laws, but he waited with curiosity to hear how Mr. Schacht would answer the objection, which had been stated by Mr. Williams, that the adoption of this scheme would eclipse the Society. He did not see that they should refuse to offer their advice because they were in a minority. Mr. Schacht, he thought, was on the right lines, but he felt the difficulty that his proposal would have the effect of eclipsing their own functions.

Mr. HILLS, while agreeing to some extent with Mr. Schacht's views, did not think that he, as a Councillor, would be justified in voting for so revolutionary a scheme without knowing better what were the opinions of his constituents on the matter.

Mr. SQUIRE thought the picture drawn of the bachelor of pharmacy was not an unenviable one, but he feared it was an ideal one. He thought it would be a good thing to have one or two representatives on the Medical Council, and he did not see that they would thereby be wiped out any more than boroughs which sent representatives to Parliament ceased to need a Town Council.

Mr. YOUNG admired the manner in which the scheme had been drawn up, and admired the boldness of Mr. Schacht's ideas. They might ultimately be realised. It seemed, however, very much like committing suicide. He thought the Society by working as an independent body had done much good, and they had no reason to be ashamed of the title of "pharmaceutical chemist." He did not see that "bachelor of pharmacy" would be any better. While he admired the scheme in some respects there were many of its details he should object to.

Mr. ROBBINS said the Committee had objected to the scheme, and he thought those outside who would not have the chance of becoming bachelors of pharmacy would object too.

Mr. BUTT thought they would not be justified in bringing such proposals before the Royal Commission without consulting a general meeting. He could understand the scheme if Mr. Schacht had been engaged by the Medical Council.

Mr. CARTEIGHE had seconded the motion because he thought its basis must commend itself to all educated men, but he must candidly say that he was not prepared to hand over any portion of the management of their affairs without having the assurance of concessions from the other side.

Mr. ANDREWS considered that the details of the scheme were fatal to it.

The PRESIDENT said the Committee could not discuss this scheme, which was so entirely beyond the limits of the powers given to them. Perhaps their progress had not been quite satisfactory of late, but when he looked back 20 or 40 years he did not think there was reason to be disheartened. It seemed to him that the adoption of this scheme would be to hand themselves over, bound hand and foot, to the Medical Council.

The VICE-PRESIDENT said after the general expression of opinion in opposition to his proposal it would be absurd for him to reply to the objections that had been raised. If they thought the proposal revolutionary, a word which he thought too strong, they were bound to vote against it. He

did not think that in any sense this scheme would swamp the Society. On the other hand he believed the compensation he suggested would be far more than sufficient to make up for any loss of power. He did not despair of converting the whole Council in time.

The motion was then withdrawn.

Mr. HAMPSON then moved and Mr. RADLEY seconded that the Committee be instructed to state to the Royal Commission that the subjects on which they wished to be heard would refer to the revision of the pharmacopœia and to so-called counter practice.

The PRESIDENT asked if it was necessary to give these instructions to the Committee.

Mr. CARTEIGHE thought it a pity they should mention the subject of counter practice.

Mr. RADLEY said a direct attack had been made upon chemists in the last Medical Bill.

Mr. WILLIAMS asked Mr. Radley what he would have them say to the Commission on this subject. Pharmacæists do now prescribe in simple cases. But could they ask the Commission to insert a clause in any medical Bill legalising the practice? Would the Government be likely to insert such a clause?

Mr. RADLEY thought they ought not to abandon the rights which chemists had established by immemorial usage.

Mr. HAMPSON said the Council had passed a resolution that they would defend any simple case of counter practice. Chemists could not altogether avoid such. He did not propose to ask the Commission to insert any clause to protect them in the practice, but he would ask them to let them alone.

Mr. CARTEIGHE moved as an amendment to Mr. Hampson's motion the omission of all the words after pharmacopœia.

Mr. HILLS seconded the amendment.

Mr. ANDREWS, while holding the strongest opinion as to the rights of chemists, thought it would be injudicious to broach the subject.

Mr. WILLIAMS remarked that if the amendment were carried there would be nothing to go before the Commission about except the revision of the Pharmacopœia.

The VICE-PRESIDENT said when he seconded the motion for bringing that matter before the Commission he had other subjects in his mind, and he certainly would not go before the Commission on such a trumpety matter.

Mr. HAMPSON said Mr. Schacht had given him the strongest support in his efforts to get the rights of pharmacists acknowledged in this way, and he thought it most unwise for him now to refer to the matter as trumpety.

The VICE-PRESIDENT did not mean that the subject was trumpety, but that that only as a motive to go before the Commission was trumpety. He thought they had best write to the Secretary of the Royal Commission, saying that they would prefer to postpone offering evidence.

Mr. SQUIRE had understood that this evidence before the Royal Commission was to be a big thing. He thought the whole position of the chemist and druggist was to be placed before them.

Mr. Carteighe's amendment was carried.

After a generally confused discussion as to the effect of this,

The VICE-PRESIDENT moved that the Secretary of the Royal Commission be informed that upon further consideration the Pharmaceutical Council would prefer to withdraw their application to be heard.

Mr. HAMPSON said if they passed that resolution they would rescind an almost unanimous vote of the Council. It was a most extraordinary proceeding to turn round and stultify themselves in that manner.

Mr. WILLIAMS was as anxious as Mr. Hampson that the Pharmaceutical Society should have its proper influence in regard to the Pharmacopœia, but there was a time for everything, and he did not think they ought to go before the Commission on that subject alone.

Mr. SYMES thought that to pass this resolution would place them in a very undignified position, and also that it was a pity to shut themselves out from such a favourable opportunity for presenting their case. The Council had in their former discussion regarded this as an opportunity which should not be missed by any means. If the Committee

had not been able to formulate the subjects of their evidence let the reply wait a month. He thought they had much to advocate.

The discussion was continued by Messrs. Squire, Frazer, and Young. On the suggestion of Mr. Symes the words "for the present" were added by the Vice-President after the word "withdraw" in his motion, and the Council divided.

For Mr. Schacht's motion—Messrs. Butt, Carteighe, Frazer, Hills, Robbins, Schacht, Squire, Williams, and Young.

Against—Messrs. Andrews, Bottle, Greenish, Hampson, Radley, and Symes.

PHARMACEUTICAL EXHIBITION.

Mr. SYMES moved the following resolution, of which he had given notice:—

That an Exhibition be held in May of next year, and that a Committee be appointed consisting of the following members:—Messrs. Radley, Richardson, Savage, Squire, and Symes.

He thought longer notice should be given of the intention to hold an exhibition, though he did not wish to establish the precedent of holding an exhibition every year. He did not propose that the Committee should hold any meetings yet.

Mr. ANDREWS seconded the motion.

Mr. WILLIAMS thought next March would be quite early enough, and after a short discussion it was resolved to postpone the consideration of the proposal till February next.

Chemists' Assistants' Association.

THE annual general meeting of this Association was held at 32A George Street, Hanover Square, on May 25, Mr. Branson in the chair.

The Hon. Sec. read the report for the session ending April 30, 1881, according to which the Association now numbers 84 ordinary and 7 honorary members. There had been 33 new members enrolled during the session, and the total showed an increase of 9 for the year. The attendance at the meetings averaged 24. Sixteen papers had been read during the session on the following subjects:—"Electro-metallurgy" (illustrated by experiments); "British Mosses;" "Sir Humphrey Davy;" "Michael Faraday;" "Geology of the London District;" "Strength and Impurities of Medicinal Hypophosphorous Acid;" "The Physical and Chemical Properties of Blood;" "Induction of Currents, and some practical applications thereof" (illustrated by experiments); "The Quantitative Analysis of Tin foil;" "Resorcin;" "Quebracho Bark, true and false;" "Preparation and Strength of Commercial Pepsin;" "Brewing;" "Sulphur;" "Oleate of Bismuth;" "Phosphoric Acid, and some of its Combinations."

The Hon. Treasurer then read a statement showing that, after paying rent and all expenses, a balance of 31*l.* 5*s.* 2*d.* remained to the credit of the Association, which compared favourably with the balance of 10*l.* 5*s.* with which the session began. The income was made up by members' subscriptions at 5*s.*—21*l.*—and donations from wholesale and retail firms and friends, amounting to over 30 guineas.

The adoption of the report and balance-sheet was moved by Mr. F. Carter, seconded by Mr. Wyeat, and carried.

Mr. PRINSEP proposed that all papers read before the Association be printed in extenso, either in pamphlet form or in a collective form, at the end of the session.

Mr. HUTCHINSON seconded the proposal.

Mr. BRANSON moved an amendment, which Mr. Wallis seconded, that the question be left to the Council for decision. This, after a lengthy discussion, was carried.

Rule 7 was altered in order to admit, without further payment for the current session, members of provincial associations who had already paid a subscription to such associations.

A vote of thanks to Mr. Branson for his services as Chairman brought the meeting to a close.

The following gentlemen constitute the Council for the ensuing session:—

President, Mr. C. E. Stuart; Vice-Presidents, Messrs. C. R. Killick and Mr. W. A. Wrenn; Hon. Treasurer, Mr. J. Hills Hartridge; Council, Messrs. F. W. Bransou, Ed. Jones, Geo. Laphorne, T. S. Pearson, A. J. Phillips, W. H. Priestley, G. F. Snow, Owen Wallis; Hon. Secretary, Mr. C. Parkinson, 338 Oxford Street, W,

Pharmaceutical Society of Ireland.

MEETING OF THE COUNCIL, JULY 6, 1881.

PRESENT:—Professor Tichborne, President; Sir G. B. Owens, Messrs. Allen, Benuett, Brunker, Collins, Grindley, Hodgson, and Simpson.

Read a letter from Mr. Payne, enclosing one from Mr. Liskar, relating to the index of the *Pharmaceutical Journal*, which he thought ought to be supplied to members.

The PRESIDENT directed that the Secretary of the Pharmaceutical Society of Great Britain be written to, to inquire upon what terms it would be supplied.

Read a letter from Mr. J. P. Harold, relative to having the certificate of the Society printed on parchment, he having, on May 25, 1880, addressed the Council upon the same subject, which was promised to be considered, and nothing had been done up to the present.

The PRESIDENT said that estimates had been received, but that the matter did not proceed further.

Sir G. B. OWENS considered it a very important matter.

Mr. SIMPSON gave notice that he would move at next meeting—

That the certificate, in future, should be printed on parchment instead of on paper, as at present.

Read a letter from Mr. R. A. Burnes, calling attention to his having been summoned as a juror, and asking to have the matter inquired into.

Sir G. B. OWENS said that, as High Sheriff, he had no power to exempt anyone; he had to summon everyone whose name was given him, even was obliged to issue summonses for persons whom he knew to be dead. He would, however, take Mr. Burnes' letter, in order to have the matter inquired into.

The PRESIDENT thought it was illegal to summon a pharmaceutical chemist.

Mr. BRUNKER believed it was a direct breach of duty on the part of the collector-general of rates.

It was proposed by the PRESIDENT, seconded by Mr. GRINDLEY, and passed—

That the Registrar be directed to send an attested copy of the calendar each year to the Collector-General, and the Clerks of the North and South Dublin Union and Sub-Sheriffs of the City and County, and the Clerk of Rathdown Union.

Read invitation from the President of the Pharmaceutical Society of Great Britain, asking the Council to the International Congress.

Read a letter from Mr. W. N. Allen, requesting the Council to make arrangement for the publication of the proceedings of the August meeting during his absence.

The PRESIDENT thought Mr. Fennell would not object to report that meeting.

Mr. ALLEN had hoped that something definite might have been arranged, as it would not be possible for him to continue to report after the end of the year, which he had engaged to do, owing to demands upon his time.

The PRESIDENT considered it premature to discuss any arrangement for next year, and trusted Mr. Allen would continue to report until after the October meeting.

Mr. ALLEN said he had promised to do so.

Read a memorial, signed by twelve members of the Society, praying that the hour of the annual meeting be changed to meet the convenience of members.

Mr. GRINDLEY remarked that no hour was suggested in the memorial as being more convenient.

The PRESIDENT thought it would be objectionable to change the hour; the present time had been fixed with the idea of suiting the convenience of the country members, who would most likely object to having it changed.

After some discussion it was not considered expedient to change the hour, having regard to country members' convenience.

The Law Committee reported upon some matters referred to it.

Read a letter from the Clerk of the Privy Council acknowledging receipt of resolution to be submitted to the Privy Council.

The motion of Mr. HODGSON, "That a sum not exceeding 16*l.* be allowed for a Milner's fireproof safe," seconded by Sir G. B. Owens, passed.

Bills for advertising, postage, and sundries were ordered for payment.

Professor TICHBORNE proposed, and Mr. BENNETT seconded, Mr. Meredith R. Whitlea for membership.

The meeting then adjourned.

At the Preliminary examination, held July 4 and 5, 14 candidates presented themselves, of whom 10 passed.

The examination for the Licence of the Society was held July 6, when the following, having been duly examined, passed:—John Patrick Devlin, Tralee; Alfred Inwood, 30 Bloomfield Avenue; Richard Cox Webb, Wexford.

The Society of Chemical Industry.

IN our April number we reported the meeting at the Chemical Society's Rooms, which led to the formation of the Society of Chemical Industry. The several secretaries appointed on that occasion seem to have worked with good success, as in little more than two months from the date of the meeting when the Society was decided upon, they had enrolled over 300 members, and were able to get up an inaugural two day's session in London, and present material of considerable practical interest to manufacturing chemists for discussion.

The session was held on June 28 and 29 at the rooms of the Institution of Civil Engineers, Westminster. There was an average attendance of 60 or 70 at the meeting. Professor Roscoe, President of the Society, was in the chair.

Mr. GEORGE E. DAVIS (General Secretary), read the report, which stated that since the formation of the Society more than 300 members had been enrolled, and gave an analysis of the occupations of those who had joined. They were classified as technical chemists 59, analytical chemists 49, manufacturing chemists 44, professors 23, alkali makers 22, patent agents 16, brewers 13, &c. They had received applications for membership from America and the Continent. Professor Hoffmann and Dr. Martins, of Berlin; Dr. Caro, of Mannheim, and Professor Lunge, of Zurich, being especially named. They did not intend to confine themselves to any particular branch of chemical industry, and they also proposed to form both metropolitan and local sections, all to be in affiliation. It was hoped that they would soon be able to issue a journal, and they had decided at least to publish a full report of the proceedings of that meeting.

The report was adopted, and then,

Professor ROSCOE delivered an inaugural address, in which he explained at some length the purposes of the Society which was to bring together persons engaged in the utilisation of chemical action on a large scale, discussing new and old processes, and encouraging good fellowship. They had heard much lately about foreign competition or even the decay of English manufactures. That foreign competition should become year by year keener, and that they who had led the way and had the advantage of the start in the race should feel this competition could in no ways surprise them. That English manufacturing skill was on the wane, or that the inventive genius of the people was dying out, he for one did not believe. Only let the Englishman know what he really needed and he would soon take care that he got it, be that need an increased technical or educated skill, or a wider diffusion of the knowledge of scientific principles. To assist in this direction, and to enable them more satisfactorily to meet the inevitable increase of foreign competition was one of the objects for which the society had been founded. He then went on to specify some of the special fields of work which he thought lay before them. There were, for instance, many foreign

processes in the alkali manufacture not yet introduced into this country, and they must all deplore the reason which prevented Mr. Weldon from placing particulars of these before them, as he had intended to do. Referring to the manufacture of soap, Professor Roscoe said many would be surprised to hear that the quantity of soap manufactured in this country had reached the enormous figure of nearly 250,000 tons. And most persons would imagine that little or nothing could be done in improving so simple a manufacture as that of soap. But it should be remembered that one useful and valuable constituent of the fats—the glycerine—was all thrown away in the spent lees, although the price which that article now fetched in the market was no less than 120% per ton. Was not the recovery of this waste product worthy of the attention of our English soap boiler. The greater part, if not the whole, of the glycerine used in this country was, he believed, imported from France, where a recovery process was worked to advantage. The possibilities of the manufacture were next dwelt upon, and Professor Roscoe, in conclusion, commented on the manufacture of aniline colours, pointing out that whilst England produced nearly the whole of the raw material she took but a small share in the preparation of the finished article. The trade done in the coal-tar colours amounted to about 3,500,000*l.* sterling per annum, of which sum the raw material could not be worth more than one-tenth. England was thus allowing other countries to work into profit her own stores of potential wealth.

A vote of thanks to the President for his address was proposed by Dr. LONGSTAFFE, seconded by Mr. CROMWELL VARLEY, and carried unanimously.

Mr. E. K. MUSPRATT then read a paper on "Recent Legislation on Noxious Gases." In this paper the history of the legislation affecting alkali works was traced, and the causes of the comparative failure of legislation on the subject was suggested. Objection was stated to the clause in the Act now before Parliament, which proposed to make the chemical manufacturers of a district liable collectively for injury. It was also urged that the Act should apply to all works emitting noxious vapours.

Mr. FLETCHER, one of Her Majesty's Inspectors, spoke on this paper, saying that though no doubt it was to the advantage of the manufacturer to receive the suggestions of inspectors, yet the interest of the manufacturer stopped short of that of the public. A man might spill some flour on a carpet, and it might be to his interest to pick up a certain portion of it, but the owner of the carpet would want it cleaned much more thoroughly.

Mr. TYLER said that, as a manufacturing chemist not connected with the alkali trade, he should be glad to have the visits of an inspector, who would often suggest valuable means of utilising waste.

Dr. Hewitt, Mr. Cromwell Varley, Mr. E. Carey and Dr. Mond, also took part in the discussion.

Dr. C. GRAHAM next read a paper on "The Manufacture of Lager Beer." He explained the differences between the processes of manufacturing English and German beers, and said that the difficulty in England had been the insufficient supply of ice, which is essential in the manufacture of lager beer. A machine had lately been perfected, however, which would enable ice to be made so cheaply that it would not cost more than 1*s.* for a 36-gallon barrel, which would be more than saved by the lesser quantity of hops needed. Referring to the flavour of lager beer, he said some people objected to the taste of garlic, which they thought was mixed with it. That flavour was caused by the pine pitching of the barrels, and could easily be obviated.

Subsequently Mr. JAMES MACTEAR read a paper on "Mechanical Furnaces." Manual labour is dear and uncertain, and mechanical appliances are a great improvement on it wherever they can be introduced. He claimed that his mechanical furnace was the first of a long series of projects which realised practical advantages. He also claimed that it worked economically, condensed the hydrochloric acid completely, needed no wash-towers, and produced no weak acid. There was comparatively little wear and tear, and rock salt could be used in it. In the discussion it was pointed out that Mr. Mactear had compared the results of his furnace, not with the best modern figures, but with figures that were antiquated.

On the evening of the 28th the members and friends of the Society, to the number of about 100, dined together at the Cannon Street Hotel, Professor Roscoe in the chair, supported on the right by Mr. Stevenson, M.P., and on the left by Mr. Greenish, President of the Pharmaceutical Society. Speeches and songs very pleasantly filled up the evening. Mr. Gossage, in the course of a speech, referred to the President's remarks in his inaugural address as to the failure of the soapmakers of this country to reclaim the glycerine from their waste, and said that a great deal of experimenting had taken place with that object, and he believed in a short time they would be successful.

On June 29 the proceedings were opened by Dr. Siemens, who made a communication on gaseous fuel. For many years he had been interested in the subject. In the use of coal, which was the commonest fuel, several disadvantages were obvious. A considerable proportion of the heat evolved by combustion was consumed in the transformation of the solid fuel to a gaseous condition. When fresh solid fuel was introduced, no matter how carefully, a very violent production of combustible gases took place, which needed a correspondingly excessive draught to prevent smoke, or waste of fuel. A large amount of power was required to carry coal from the store to the furnace, and to put it on the fire; and it was a source of endless dirt. With gaseous fuel most of these disadvantages were obviated. The fuel could be easily distributed without hand labour wherever it was required. The heat of combustion was not wasted in raising solids to a gaseous condition. The fuel could be intensely heated before it was admitted to the furnace, so that none of the whole heat of combustion was expended in raising the temperature of its products. The draught could be regulated to a nicety and required no adjustment.

Dr. Siemens explained the construction of an improved gas-generator with which he had obtained excellent results, its object being to produce a gas suitable for all heating operations at the lowest possible cost. For this purpose slack coal is fed by a hopper into a furnace. A current of air heated, as much as possible by waste heat, is forced into the very centre of the furnace, and keeps up an intense combustion. The excess of carbon present destroys or prevents the formation of carbon dioxide, and the resulting gases, which are a mixture of carbon monoxide, hydrocarbons, some hydrogen, and a proportion of nitrogen, are conveyed by lateral orifices to the regenerative gas-furnace. The excess of heat present in the centre of the generator is utilised by an ingenious addition. Round the base of the grate is a trough of water. This is vaporised by the waste heat, and the steam is carried by the draught into the furnace, where the watery vapour is decomposed by the excess of incandescent carbon, carbon monoxide and hydrogen being produced. This method of obtaining fuel is only economical where the energy required to decompose the water would be otherwise wasted. Exactly as much energy is consumed in decomposing water as is produced by the recombination of its constituents. In this case, however, the water acts as a carrier conveying the surplus energy to a place where it could be profitably employed.

In the regenerative gas-furnace described the temperature obtained nearly approached the point of dissociation, at which combustion itself ceases. The hearth is built over four arches, which are filled with a refractory material such as firebrick. These are so arranged that the gas and air could be supplied through either of the two pairs alternately, the products of combustion escaping by the other. The gas and air being turned on are ignited, and the products of combustion after leaving the hearth pass over the firebrick, heating it nearly to their own temperature. At a given time the direction of the current is reversed, the gas and air pass over the intensely-heated firebrick, become heated themselves to a very high temperature, and on burning in the hearth raise the temperature there as many degrees as they have taken up from the firebrick. This process goes on indefinitely, and the flame, which at first is short and white, becomes blue, and fills the whole length of the furnace, showing that combustion is carried on under difficulties, or, in other words, that the point of dissociation is nearly reached.

At the request of the President Mr. Siemens then described two applications of the regenerative principle to domestic lighting and heating. Both applications rest in principle

on the use of waste heat to raise the temperature of the fuel and air before combustion takes place. The regenerative gasburner is an argand, with a central copper rod, which conveys the heat of the flame to an arrangement of copper gauze, through which the air which supports the flame is drawn. With this burner about 50 per cent. more light is obtained from the gas.

The accompanying woodcuts illustrate the plan and elevation of the regenerative domestic grate. Dr. Siemens has 17 of them in use in his own house, and has at last obtained the approbation even of the housemaids. A is the back of the ordinary fireplace, to which a copper plate, $\frac{1}{8}$ inch thick and 10 inches wide, is attached. B in both illustrations is a "frill," or series of deep convolutions of copper sheet $\frac{1}{16}$ inch thick, well connected with the

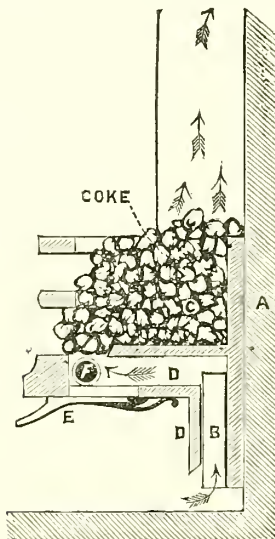
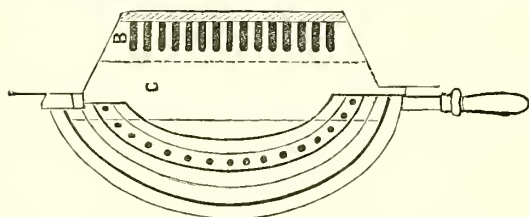


plate just mentioned, and nearly reaching the dead-plate (C in the plan). C is of iron, riveted to the copper plate, and taking the place of the ordinary firebars. D is an angle-plate, with trap-door E for removing ashes. F is a $\frac{1}{4}$ -inch gas-pipe, with holes $\frac{1}{16}$ inch in diameter at intervals of $\frac{3}{4}$ inch. The fire is the ordinary gas and asbestos, with two important modifications. The plate and frilling B being of copper, take up the spare heat very readily and convey it to B. The temperature of the draught, which passes only through B and D, becomes raised considerably, and the heat of combustion is thus economised. The draught is supplied only at the point F where it is required. In place of the



ordinary asbestos, which requires a constant full supply of gas to maintain its incandescence, Mr. Siemens has adopted coke. The gas is turned full on and lighted, producing at once a brilliant-flaming fire. In half an hour or less the coke has become heated to the point of combustion. The gas may now be turned down, and the coke continues to burn for six hours or more without attention, with no smoke or dust. The coke not only takes up the heat, but adds to and maintains it. Combustion is confined to the outside, and so a very large proportion of the heat produced radiates into the room. The advantages of the grate are—(1) the ease with which the fire is controlled; it can be lit or put out at will; (2) the saving of labour in lighting, in attention, and in carrying coal from the cellar to the fire-side; (3) the entire absence of smoke. With gas and coke at present prices the economy over coal is not large

enough to be striking. Ladies complain loudly that they cannot poke these new fires.

A long and interesting discussion followed, in which Messrs. Davis, Armstrong, Mond, Wright, Tyrer, I. Lowthian Bell, Bird, Fletcher, and C. Varley took part. Dr. Siemens in reply stated that he was very glad the discussion had been so full and valuable.

In the afternoon Dr. Mond read a paper on "Patent Laws as Applied to Chemical Inventions." He thought a careful distinction should be made between actual chemical inventions and mechanical inventions for facilitating chemical operations. He considered that an inventor of a new aniline colour, for example, should be able to patent the substance, whether it were made by oxidising with potassium bichromate or arsenic acid. No patent should be granted for a mere idea. Some evidence of industrial practicability ought to be produced before provisional protection is granted. The provisional specification should specify definitely what the applicant proposed to do, and provisional protection should extend for two years to allow practical difficulties to be overcome. Commissioners of eminence and high scientific attainments should be appointed to act on the same lines as the Railway Commissioners, adjudicating between the interests of the inventor and of the public.

In the discussion which followed Messrs. Perkin, C. Varley, Muspratt, F. Varley, Hewitt, Morgan, Major, and Tyrer took part, and a motion by Mr. C. Varley that a sub-committee should be appointed to consider the question was carried unanimously.

Metropolitan Reports.

FIRE.—On the afternoon of June 23 a fire was discovered on the premises of Messrs. T. Morson & Son, manufacturing chemists, situate in the High Street, Homerton. The employees engaged in the place were at work at the time the alarm was given, and a private hydrant was at once resorted to in order to extinguish the fire. It was in the still-rooms that the outbreak first originated, and before the arrival of the members of the Metropolitan Fire Brigade the flames had attained threatening proportions. A steam-engine and two standpipes were brought into play. There was a good supply of water, but notwithstanding the exertions of the firemen the building was nearly burned out, and most part of the roof was destroyed. The building and contents were insured in the Manchester Office.

EXCURSION.—On Saturday, the 9th inst., at Chingford, Messrs. Evans, Lescher & Webb gave a dinner to their employees to commemorate the rebuilding of 60 Bartholomew Close. Covers were laid for 85. There were no visitors, as the firm wish only to have their own people, but a report was taken by their short-hand writer. Mr. F. Harwood Lescher was in the chair, supported by Mr. E. Alfred Webb, and at the end of each of the four long tables sat one of the stewards. In the early part of the day, a cricket match had taken place between the counting-house and the warehouse, while some enjoyed lawn-tennis, others got up races, and others wandered among the groves of Epping Forest. When the dessert was placed on the table, and after the usual loyal toasts, Mr. Webb proposed "The Office" and Mr. Lescher "The Warehouse," to which the seniors in their respective departments responded. To the toast of the "Eight Travellers of the London House," Mr. Cooke and Mr. George humourously replied, and then Mr. Webb proposed "The Liverpool and Montreal Firms," insisting on unity of purpose and thoroughness of work, and calling attention to the great increase in the business of the firms since the last occasion they dined together, and the benefit which had accrued to the London firm from the increased accommodation afforded by their new premises. Mr. Selke, one of the Liverpool travellers, answered to this in a few genial words. Mr. Philip Roberts, who stated it was 47 years since he entered the service of what was then Evans & Lescher, now proposed "Prosperity to the Firm," and the way in which this toast was received showed the kindly regard in which the partners were held by those present. Mr. Lescher, in returning thanks, gave a little sketch of

what the house must have been 50 years ago, when the town round went out in a basket on a porter's knot, and went on to say that their present success was mainly gained because they endeavoured

To live by law,
Acting the law we live by without fear.

Other toasts were then honoured, and several songs added to the general enjoyment. Everything contributed to make the day enjoyable. Mr. J. Sidney Lescher, now in his 78th year, sent a congratulatory telegram. The weather was beautiful, the surrounding forest scenery in its perfection; drugs weighed no longer on the mind, chemicals evaporated from the thoughts, and the unadulterated pleasure of social intercourse remained to cause the day to be long remembered by all who were present.

Provincial Reports.

ABERDEEN.

CHEMISTS' ASSISTANTS AND APPRENTICES' ASSOCIATION.—A picnic was held at Milltimber, on June 29. The arrangements provided by the committee were very successful, and the several games and amusements were entered into very heartily by all present, dancing to an excellent string band being kept up with great spirit throughout the afternoon and evening. The company numbered over 150.

THE ABERDEEN SOCIETY OF CHEMISTS AND DRUGGISTS.—ANNUAL DINNER.—A party representing the above society, and consisting of 15 gentlemen, visited Aboyne for a day's excursion, to wind up with a dinner at the Huntley Arms Hotel. By permission of Mr. Cunliffe Brookes, Esq., M.P., the party after reaching Aboyne drove through Glen-lanar, the scenery of which is extremely grand. Mr. Brookes had given instructions that the company should inspect whatever might interest them, and on his behalf they were hospitably entertained at the lodge. In the evening, after the dinner, at Aboyne, the following toast list was gone through. "The Queen," by the chairman (Mr. Paterson); "Prince and Princess of Wales and the other Members of the Royal Family," by the Chairman; "The Aberdeen Society of Chemists and Druggists" by the Chairman, coupled with Mr. Broomhead; "The Pharmaceutical Society," by Mr. G. S. Shepherd, coupled with Mr. Strachan; "The Medical Profession," by Mr. Ritchie, coupled with Dr. Moir; "Our Country Friends," by Mr. Giles, coupled with Mr. Lunan; "Aboyne and District," by Mr. Sim, coupled with Mr. Ritchie; "The Ladies," by Mr. Johnston, coupled with Mr. Hodgkinson (of London); "The Chairman," by the Croupier (Mr. Sim). Messrs. Coutts, Cruickshank, Johnston, Sutherland, and Petrie, were the other members of the party.

BANFF.

A BULL IN A DRUGGIST'S SHOP.—On July 2, while a pair of bullocks were being driven through the town, one of them rushed into the shop of Mr. William Alexander, druggist. A young lady who was in the shop at the time had the presence of mind to run round the counter, and take shelter in an empty corner below the board. The ox walked round to the back of the counter also, and made as if to escape by the north front window, but was scared from doing so, and driven out by Mr. Pantan, the assistant, but only after the back shop had been visited. A large number of bottles were broken, and the contents lost, besides damage to the shop-fittings, &c.

BISHOP AUCKLAND.

ADULTERATED SPIRIT OF NITRE.—On June 27, at the Petty Sessions, John Paley, of Middleton, was fined 1*l.*, including costs, for selling adulterated sweet spirit of nitre.

EDINBURGH.

CHEMISTS' ASSISTANTS AND APPRENTICES' ASSOCIATION.—At a special meeting of the Association held on Thursday, June 16, and at an adjourned meeting held on Tuesday, June 28, it was resolved to forward the following resolutions

to the Executive Committee of the International Pharmaceutical Congress in response to their invitation.—1. *As to the best means of attaining uniformity in the strength of potent drugs common to the pharmacopœias of all nations.*—"That the object in view may be forwarded by the universal adoption of the metric system, and by making all preparations by weight only."—2. *As to pharmaceutical education.*—a. "That this Association is of opinion that the Preliminary examination of the Pharmaceutical Society should be passed before apprenticeship is entered upon." b. "That the very large percentage of failures in pharmaceutical examinations in Great Britain clearly indicates some great defect in the existing arrangements for pharmaceutical education." "That the foreign delegates to the Congress should be invited to state their experience as to the desirability, or otherwise, of a compulsory curriculum as a means of improving the present unsatisfactory state of affairs, and especially how such a curriculum could be made available for provincial students."—3. *As to Pharmacopœia revision.*—"That pharmacists ought to have a place on the Pharmacopœia revision committee in Great Britain."

GREENWICH.

ILLEGAL SALE OF POISONS.

At the Greenwich Police Court on June 16, before Mr. H. V. K. Measham, Stipendiary, Thomas Watkins, of 14 Broadway, Deptford, oil and colourman, was charged with having sold a packet of Battle's vermin killer containing strychnine, to George Revill Templeman, Assistant Secretary of the Chemists and Druggists' Trade Association of Great Britain, without fulfilling the requirements of the 17th section of the Pharmacy Act.

Mr. Glaisyer, solicitor of the Association, appeared for the prosecution, and having explained the case, called Mr. Templeman as a witness, when Mr. Measham asked the defendant if he was guilty. The defendant said he had no recollection of the sale, but he had no doubt it was true that he sold the article in question. He had been in business a long time as oil and colour dealer, and several of his colours contained poison. He was not aware that he had done anything illegal in selling the vermin killer, and for the future he would cease to keep it in stock. If the Act applied to the colours sold by him containing poison, then his business would be gone.

Mr. Measham said the Act only applied to certain poisons mentioned in the schedule, and he advised the defendant to obtain a copy of the Act, and peruse it carefully.

Mr. Measham: I suppose you do not press for a heavy penalty in this case, Mr. Glaisyer.

Mr. Glaisyer said he would be content with a small fine. The object which his clients had in view was to prevent the sale of poisons by incompetent persons, a practice which was now carried on to a great extent, and to show the public that it was illegal to do so.

Mr. Measham, addressing the defendant, said he would advise him to be careful as to what he sold, and as he had promised to comply with the requirements of the Act for the future, he should only inflict the small penalty of 5*s.* and costs.

LEEDS.

TERRIBLE DEATH.—On June 22, at noon, a man named Joseph Sellars, employed as a teamster by Mr. Benjamin Mortimer, Woodside, Cleckheaton, met with his death in a shocking manner at Farnley, near Leeds. He was in charge of a lorry loaded with 15 carboys of vitriol, which he was conveying to Leeds from the firm of Messrs. Saunders & Saunders, chemical manufacturers, Westgate, Cleckheaton. The dray was drawn by one horse, and in attempting to turn the corner of a road at Farnley Moor rather sharply the waggon tilted over. Sellars was knocked down by the waggon; the carboys broke all round him, drenching him with sulphuric acid. He was rescued as speedily as possible by a bystander, and was found to be shockingly burnt. A portion of the skin and muscles of his left upper arm near the shoulder had been destroyed for some distance, laying bare the bone. The left foot and ankle were similarly destroyed, as were also several other parts of his body. Shock to the system caused by the extensive destruction of tissue caused death in about two hours. He never regained consciousness.

LIVERPOOL.

FIRE AT MESSRS. EVANS & SONS.—About half-past ten A.M. on July 4 an alarming fire broke out in the warehouse of Messrs. Evans & Sons, wholesale druggists and chemical manufacturers, Fleet Street. A steamer pump and a manual were soon on the spot, and the fire was quickly extinguished. It was confined to a lower room, and was caused by a spark from a furnace igniting a large basin of chemical composition. The workmen rushed out as quickly as they could, but one of them was badly scorched about the left arm. Fortunately the room was fireproof, or otherwise the extensive premises, containing such a quantity of inflammable and explosive combustibles, might have been entirely destroyed.

MANCHESTER.

THE VIN-SANTÉ AND NON-ALCOHOLIC BEVERAGE COMPANY (LIMITED).

THE first ordinary general meeting of the Vin-Santé and Non-alcoholic Beverage Company (Limited) was held on July 1 at Manchester, Mr. James Croston, the chairman of the company, presiding.

The meeting was purely formal, and was held in accordance with the Act of Parliament which necessitates a meeting within four months of the registration of the company. The chairman said that when the company took over the business of Messrs. Morgan, Kempster & Co., of Liverpool, they found the demand for Vin-Santé already greater than their power of production, and they had therefore largely extended their plant and increased their premises. Their power of production was now equal to about 3,000 dozen per day. With respect to the beverage he need say little; he believed it to be the very best in the market, and that was evidenced by the general favour with which it had been received. He believed he was correct in saying that in the first four months of the company's existence the sales had been in excess of those of their great rival—the Zoedone Company—in the same period of its history. The whole of the share capital had been allotted, and the applications were largely in excess of their power to allot. They had no bogus shareholders, and the calls due had been promptly paid up. With regard to the sales, it was a very fortunate thing for the company that they had the co-operation of two such eminent firms as Messrs. Evans, Sons & Co., of Liverpool, with branches in almost every part of the world, and also with Messrs. Crosse & Blackwell. The last-named firm had about 10,000 agencies, and Messrs. Evans very nearly the same number, so that they commenced business with a very complete organisation. The chairman next read a letter from Messrs. Evans, Sons & Co. upon the general business, which they stated to be one of very great promise, and expressed their confidence in its becoming the national beverage of the country.

Mr. Evans also spoke of the success which had attended their efforts in introducing Vin-Santé, and read an extract from a letter from Messrs. Crosse & Blackwell highly approving of Vin-Santé, and the certainty of its making way, and further reporting the great success which had attended their efforts to introduce Vin-Santé in India, Australia, Egypt, the Cape, New Zealand, and America.

PRESTON.

LOCAL EXCURSION.—On July 6 the Pharmaceutical Students' Society had a picnic to Chatburn, 6 miles beyond Clitheroe. Starting from Preston at 8.50 A.M., the party reached Chatburn at 11. They walked thence to Sawley, to view the ruins of the once celebrated Cistercian Abbey, founded in the year 1147 by William de Percy, grandson of William de Perel, who accompanied the Conqueror to England. On returning to Chatburn they found a bountiful repast awaiting them at the Pendle Hotel, and, after partaking of it, they set themselves the task of climbing Pendle Hill, which stands 1,850 feet above the mean sea-level. In fine clear weather the view from the top of Pendle, for variety and extent, yields to no other such "coign of vantage." The keep of Lancaster Castle, the towers of York Minster, a beautiful panorama of country between Pendle and Settle, and the picturesque valley of the Ribble, are spread before the gaze; but mist and rain unfortunately

debarred the students from the full enjoyment of their excursion. After tea at their hotel they returned to Preston, which they reached at about 10 P.M.

DEBTS FOR LAUDANUM SUPPLIED NOT RECOVERABLE.—At the Preston County Court on June 28, before Mr. W. A. Hutton, Judge, Messrs. J. Hargreaves & Son, chemists, Fylde Road, Preston, sued Mr. T. Moss, of Aqueduct Street, to recover 6*l.* 6*s.* 4*d.*, alleged to be owing by him for laudanum supplied to his wife. Plaintiffs stated that between July, 1879, and May, 1881, they had supplied laudanum to Mrs. Moss in various quantities, sometimes as much as 6 oz. at once. Mr. Hargreaves had a ked Mr. Moss if he should supply her with the laudanum, and he replied that he supposed she must have it, as the doctor had ordered it. He charged 2*s.* for 6 oz. of the drug. In cross-examination by Mr. Forshaw, the plaintiff admitted that he did not think any doctor would order a woman to take 2*s.* worth of laudanum per day, but on Mr. Forshaw showing that according to his bill the woman had been supplied with 2*s.* worth of laudanum almost daily, the plaintiff said the bill was quite correct. Altogether he supplied her with laudanum to the value of 8*l.* 13*s.* 4*d.*, but she had paid 2*l.* 7*s.* on account. Mr. Forshaw, for the defence, contended that all this laudanum could not surely be held to be necessary, and a woman's authority could not extend to her being able to get drugs in that wholesale way. It might have been to poison her husband and children. The husband knew nothing about the transaction. Mr. Moss said he did not know that his wife was getting the laudanum, and Mr. Hargreaves had never spoken to him about it. If he had known that his wife was taking "that sort of stuff," he should have tried to stop her, as in case of accident people might have said he had poisoned her.—His Honour nonsuited the plaintiff, with leave.

SALISBURY.

TRICYCLE CASE.—Edward Peck, chemist's assistant, recovered the cost of his tricycle from Mr. Thomas Miles, farmer, at the Salisbury County Court on June 12. Plaintiff was travelling by moonlight on May 7, and came upon defendant's locomotive on the wrong side of the road so suddenly that he had to jump off the tricycle between the engine and the bank, leaving his machine to its fate, which was melancholy.

SHEFFIELD.

FIRE.—On July 4, about four p.m., a fire was discovered upon the premises of Messrs. Cubley & Preston, chemists. The fire originated in the cellar below the shop, where a quantity of various kinds of acids is kept. A gas-jet was burning during the afternoon, and it is believed that in consequence of the excessive heat a bottle containing bisulphide of carbon, standing near the gas-jet, exploded, and at once set fire to the shelving. Superintendent Pound and six or seven members of the fire brigade were quickly in attendance, and Police-constable Meggitt, having put on a respirator to protect himself from the noxious fumes, went towards the back part of the shop, and threw buckets of water upon the burning timber. Superintendent Pound procured a quantity of hydrochloric acid and carbonate of lime, which were mixed and thrown down the grating at the back of the premises. By these means the fire was confined to the cellar, and extinguished before much damage was done.

TENBURY.

A GRATEFUL ELEPHANT.—Two years ago we published an account of the elephant Lizzie's recognition of Mr. Turley, of Tenbury, a chemist, who had treated her for a bad attack of colic five years before. This year the menagerie has again visited Tenbury, and Mr. Turley visited it during the evening. Lizzie at once recognised him, and embraced him with her trunk to the alarm of the bystanders.

PHARMACEUTICAL EXHIBITION IN SPAIN.—The Colegio de Farmacéuticos de Madrid announce a pharmaceutical exhibition to be opened on November 21, 1882, in some town in Spain to be hereafter announced. Only Spaniards will be allowed to exhibit, and the exhibition will include all crude and manufactured pharmaceutical goods, as well as apparatus and literature.

THE MEDICAL EXHIBITION.

PRELIMINARY NOTICE.

THE International Medical and Sanitary Exhibition, 1881, at South Kensington, will be formally opened on Saturday next, July 16, by the Right Hon. Earl Spencer. On July 13, when we visited it, the exhibits ought to have been in position. But the exhibition in which rules of this kind have been strictly observed, has yet to be organised. In the Sanitary section the ground was torn up for the laying of drains. In the Medical section heavy statues were being moved out of the way. In both departments cases were being erected, arranged, gilded, and dusted, while statues of satyrs, sovereigns, and nymphs looked on with serene indifference. Still, a sufficient number of cases were in place to allow a fair idea to be formed of the extent and interest of the exhibition. They are arranged very conveniently on the two sides of the exhibition building, which is itself a long semi-circular corridor. The visitor passes between the two rows of exhibits, with no need to wander from his path in search of hidden alleys and nooks, and with no fear of over-looking anything of interest. No position, moreover, is more prominent than others.

From the greater bulk of the articles displayed, the Sanitary section occupies more room than the Medical, with which pharmacists are most concerned. The Sanitary section has quite as much claim as the latter, on the attention of the chemist who is interested in municipal affairs, but hardly comes within the scope of our report. In our hasty passage through it we noticed a few well-known names and occasionally some stoneware chemical apparatus. The visitor with any concern for the sanitary and economical welfare of his home will find much in this section of service to him.

The chief interest of the exhibition will rest, not on English reports, but on the opinions of the foreign visitors. The display is naturally mainly British. Some excellent foreign houses are represented in it, but hardly enough to present a fair appearance of rivalry in the business of medical and sanitary science. The majority of the British exhibits are already well known to the energetic chemist, and the exhibitors have evidently regarded him less than their more distinguished inspectors, the international doctors.

At this date it is impossible to attempt any systematic survey of the objects displayed. We therefore cast our preliminary report in the form of a rough annotated catalogue, mentioning the names of the exhibitors as we reach them in moving from the entrance, and noticing anything which appeared specially remarkable.

The first display on the left is that of Messrs. Evans, Sons, and Co., of Liverpool, and that of Messrs. Evans, Lescher, and Webb, of London. It includes all their well-known specialities, vin santé, lime-juice beverages, fossiline ointments and plasters, savarases, capsules, &c., which it would be a bad compliment to describe minutely. A less known exhibit, also under the charge of these firms, is that of M. Canzuch, of the British Pharmacy, Constantinople. Packham & Co. (Limited), show hedozone and aerated waters made with distilled water. Hooper & Co. show aerated waters and surgical and invalid appliances. The Apollinaris Company (Limited), have a large show of Apollinaris and Hunyadi Janos waters. The Newry Mineral Water Company have a stand close by.

One of the finest and most interesting exhibits in this section is that of Messrs. A. & M. Zimmermann. This firm is exhibiting for several German and other continental manufacturers, for the Chemische Fabrik auf Aktien (late E. Schering), for the Chininfabrik Braunschweig, for H. Finzelberg, Andernach on the Rhine, for Gustav Rhodins, of Burgbrohl, the Vereinigte Chemische Fabriken zu Leopoldshalle, near Strassfurt, Kunheim & Co., Berlin, Goedecke & Co., Leipzig, Carter & Meyer, Leghorn, S. F. de Pasquale & Fratelli, Messina, and Ch. Christoff, of Kezanlik, Eastern Roumelia; the centre of the otto district. This display will probably attract much attention. One of the most noteworthy objects is the tannic acid in patent crystals, which are so long that the mass of them look like dirty tow.

This is shown with several other varieties of tannic and gallic acids, for the successors of E. Schering. The Chinin-

fabrik Braunschweig shows cinchona products; Finzelberg has pepsine of various grades, berberine, ergotine, and dialysed iron. Rhodius exhibits alkaline carbonates of phenomenal purity.

It is not our place to teach exhibitors their business, but we will just point out how much such displays as these lose by want of contrast. These fine products would impress the imagination much better if samples of commoner quality were placed beside them, and some table were prepared displaying graphically the comparative amount and kind of impurities. Goedecke & Co. show, of course, essential oils of the rarest kinds: among them, cardamom, wormseed, orris, and galbanum. Carter & Meyer display the finest Buti olive oil, the best in Tuscany; also orris and gentian roots, and real Italian castor oil.

Messrs. J. Moorhouse & Co., of Manchester, show ordinary mineral waters and two specialities—Sparkling Rozz and Sparkling Eupotos. The latter is a pleasant beverage flavoured with jargonelle pear.

T. T. Hirst & Co., proprietors of the Purton Spa, Wiltshire, show the produce of their spring, "the Purton Natural Sulphated and Bromo iodated Saline Water"—rather an exhausting title if it has to be used many times a day. The water contains .066 grains of sodium iodide, and .092 grains of magnesium bromide, a gallon.

Corbyn, Stacey & Co.'s fine case contained, when we passed, two melancholy cylinders, one of cod-liver oil, and the other of gurjun oil.

The Andover Aerated Water Manufactory had a case here.

Messrs. Gale & Co., Bouverie Street, have a good display of drugs and preparations. We noticed especially some fine neat specimens of quebracho, alstonia, and casca bark, true Chian turpentine of the 1880 crop, a new narcotic preparation named opiatine, of the same strength as laudanum; eblorozone, and ricinic emulsion.

Leopold Hoff, besides the ordinary malt extract preparations, has a new one—Extract of Malt Jelly. This is, we think, a decided improvement. The jelly is crisp and pleasant, not sticky nor fluid. It cannot ferment, and seems far more palatable. It is put up flavoured with lemon, and and also combined with quinine, pepsine, and other things.

Mr. Martindale shows a long series of alkaloids and active principles. Pastils of aconite, bismuth, carbolic acid, and iodoform are elegant preparations. His nitro-glycerine tablets are also noticeable. The Geneveva Mineral Water Company, limited, and the Hoozer Mineral Water Company's products are shown here. Messrs. Blake, Sandford, & Blake, and Burgoyne, Burbidges & Co., have cases here which were empty at our visit. H. & T. Kirby & Co., show some striking new dietetic articles, as pulvis carnis bovis, beef oatmeal, beef gluten, containing gluten flour in place of farinas, prepared haricots for the immediate production of white soup.

The British Siphon Manufacturing Co. show some elegant new forms of their staple articles. Some of these are of tinted glass, blue, green, garnet and amber, cut or otherwise. Others have the name and trade-mark of the vendor engraved on them by the sand-blast process.

The Maltine Manufacturing Co., show all their preparations.

Messrs. W. H. Bailey & Son, of London, and W. R. Warner & Co., of Philadelphia, U.S., have here empty cases. The British agents for the latter are Messrs. F. Newbery & Son.

Mr. J. S. Haywood shows his bandages and surgical appliances. Salmon, Ody & Co., have their patent self-adjusting truss. Messrs. Allen & Hanbury have a large case. Robinson & Sons have a good display of their cotton wool, bandages, and lint, including their improved patent surgeon's lint. J. N. Davidson, of Dundee, shows his cod liver oil emulsion and concentrated sweet rennet.

Messrs. F. C. Calvert & Co., besides their usual preparations, show their carbolic acid vaporiser. This is an ingenious instrument. A loose heater, when red hot is dropped into a hole, a cover is placed over it, and carbolic acid poured on. The vapour thus generated penetrates everywhere, and no better means of disinfecting an entire house has been devised.

Messrs. J. Richardson & Co. have a large case, not yet filled, though imagination can easily supply the vacancy.

Messrs. Edward and Bradley show india-rubber surgical instruments.

The Frances Feeding Bottle which we noticed and described last month at the Pharmaceutical Exhibition is exhibited here.

E. Merck of Darmstadt has a fine show of rare alkaloids and active principles. Among them are specimens of leptandrin, nearly white, ditain hydrochlorate, cyclamin, chlorogenin, cathartine acid, scillipicrin, cotoin, scoparin, spartein, guanidine carbonate, and many others. In fact in this particular feature his exhibit has hardly a rival.

Most of the articles exhibited by Messrs. Young & Postans were shown last month at the Pharmaceutical Exhibition.

G. Van Abbot means to show diathetic and invalids' foods, but they were not in place.

Roberts & Co., English and French chemists, of New Bond Street and Paris, are exhibiting various foreign productions.

Messrs. James Allen & Son, of Marylebone Road, have a good display of their sick-room and other appliances.

Southall Brothers & Barclay show their absorbent pads, sanitary towels, cod liver oil, emulsions, soluble meat, and collections of materia medica and materia dietetica. This exhibit is of good medical interest, and likely to raise British pharmacists in the eyes of foreigners.

Messrs. P. J. Winter & Co. display patent bandages, medicated cotton-wool, and similar goods.

Messrs. Churchill have a fine display of medical literature. The Condy's Fluid Company, and Kopf's consolidated soups, next attract attention.

Price's Patent Candle Company, besides the articles which chemists and exhibition visitors are familiar with, show splints and supports stiffened with paraffin for surgical cases.

The Aylesbury Dairy Company exhibit the three articles—koumiss, peptonised milk, and artificial human milk, which are briefly noticed on another page.

The Cheshorrough Manufacturing Company show a large variety of vaseline preparations.

Mr. Corsan, of the London Sandblast Works, sends some handsome samples of his goods. All who have not made their acquaintance should make a point of doing so. The process by which the effects are produced is a very curious one. The parts of a design intended to be engraved in relief on glass are covered with wax or some soft material; a blast of air, arranged something like that in a vapouriser, with sand instead of scent, is then directed on the glass. The sharp angles of the sand applied in this way cut the exposed glass to a surprising extent, and the soft coating on the other parts protects it completely.

Sanitas and Glacialine compete side by side for public attention.

Mr. Newman, the agent for Johann Hoff, exhibits his extract of malt in various forms, all of which seemed to be familiar.

Brand & Co. have a full case of their essence of meat and similar preparations.

John M. Richards shows lactopeptine, and simple and compound lactopeptine syrups.

Battley and Watts come forward with a series of Battley's liquors, the secret of the manufacture of which seems still inviolate.

Messrs. F. and C. Hancock, of Dudley, are showing their mixing machines.

Herr Burk, of Stuttgart, one of the few foreign exhibitors, shows various medicinal wines, or Arzneiweine. Among these are pepsine, iron and quinine, and a combination which seems novel—cacao and quinine. All are put up in cardboard cases.

Messrs. Fletcher, Fletcher & Stevenson, of Holloway, have an attractive exhibit, in which is included specimens of their popular concentrated liquors for the preparation of chemical syrups, a fine sample of sublimed iodine, and some specimens of crystals of phosphoric acid, similar to those exhibited by Messrs. Huskisson at the Pharmaceutical Exhibition last month, which aroused so much interest among chemists. That the crystallisation has been effected a second time seems to refute those who maintained that Messrs. Huskisson's hatch was a chance production.

These few notes of the exhibition, in a very incomplete state, will sufficiently prove that an interesting technical collection is now on view in London. We have only to express one word of regret, and that is that a charge should be inflicted for admission. The exhibitors all pay for space sufficient, no doubt, to satisfy all expenses. The general

population of London would hardly be likely to overcrowd these corridors even if they could enter gratis, and the exhibitors would probably have found somewhat better results from their enterprise if interested visitors were not taxed to make acquaintance with their products.

FORMULÆ OF SECRET MEDICINES.

The Formulæ given below are translated (by special permission of the author) from a German collection compiled by Mr. Edward Hahn, Apotheker. The names following most of the Formulæ are those of the authorities quoted for the analysis. The weights are almost invariably given in metric denominations. A gramme is equivalent to 15½ grains. The prices quoted are the nearest English equivalents to the original retail price.

[g. = grammes; p. = parts.]

SYMPATHIE-BALSAM is tinctura henzoes composita.—*Hager.*

SIROP DE FLOX.—A reddish syrup containing morphia.

SIROP DE PAGLIANO (Florence).—An unsurpassed preventive of all diseases. A mixture of spirit, 10; haq jalap powder, 3; and brown syrup, 2.—*Eckert.* Or, huck-thorn berries, 500; crocus of antimony (brown oxide of antimony), 100; powdered scammony, 60; jalap resin, 15; intimately mixed, left till the fermentation is quite finished, then passed through a hair sieve, and mixed with a decoction of quassia, 200; tamarinds, 50; rhubarb, 50; and water, 300; reduced to 200 and filtered. 50 g., 2s. 9d.—*Dorevaux.*

THE ORIGINAL TABLET OF ALABASTER.—Chalk and French chalk.

TANNINBALSAMSEIFE, BALSAMSEIFE—BALSAM SOAP—TANNIN BALSAM SOAP (C. G. Hülsberg, Berlin).—For sunburn, red skin, pimples, scurf, and skin diseases of all kinds. Coconut-oil soap, with a little fir-wood extract and prepared talc. It contains no tannin. 100 g., 1s.—*Hager.*

TANNIN OIL (G. Gadick, Berlin).—For colouring and promoting the growth of the hair. A solution of tannin in glycerine, perfumed with oils of bergamot, orange, geranium, &c.—*Hager.*

TANNIN OIL (Charles Gaillard, Berlin).—Infallible preventive of the falling out of the hair. Castor oil, 80; strong spirit, 120; tannic acid, 3; bergamot oil, 1; lemon oil, ½; with other essential oils.—*Hager.*

TEINTURE AMERICAINE POUR LA BARBE, AMERIKANISCHE BARTINTUR—AMERICAN TINCTURE FOR THE BEARD.—Three fluids and a brush. No. 1 is a solution of gallic acid in alcohol or a tincture of galls; No. 2 an ammoniacal solution of silver nitrate containing 9 per cent. of the salt; No. 3 is a solution of sodium sulphide.—*Wittstein.*

TEINTURE DE VENUS DU DR. LOUIS BONNOT is a hair-dye. The Saxon public have been earnestly warned against its use, for it consists of a mixture of lead acetate, milk of sulphur, glycerine, and French brandy. 75 g., 2s.—*Hager.*

THÉOBROMADE AND THEOBROMINE (Duval).—Recommended for chest diseases. Watery extract of cacao pods evaporated to dryness.—*Chevallier.*

TIC PILLS (F. Earle, chemist, Hull).—Pills weighing .2 g. each, containing veratrin .09 g., and opium .02 g., with bitter extract and rhubarb. 16 pills in a box, rolled in lycopodium.—*Hager.*

TILLY-TROPFEN—TILLY DROPS.—Oleum terebinthine sulphuratum.

TINCTURA CONFORTATIVA SICHERERI—A REMEDY FOR SEXUAL WEAKNESS.—An alcoholic solution of different resins, as storax, Peruvian balsam, benzoin, and probably also containing cantharidine. 50 g., 6s.—*Aug. Klinger.*

TINCTURA PERIGOZZI (Fontanaci, greengrocer, Munich).—For cholera. A tincture of *Rhus coriaria*.—*Hager*.

TINCTUR ZUM PINSELN BEI DIPHTHERITIS—TINCTURE FOR PAINTING IN DIPHTHERIA (E. Karig, Berlin).—A mixture of carbolic acid, 15 g.; iodine tincture, 8 g.; water, 60 g. The mixture is imperfect, as the greater part of the carbolic acid forms a layer at the bottom of the bottle. 3s.—*Schädler*.

INK PENCILS, COPYING INK PENCILS.—The writing material in these consists of graphite and an aniline dye, incorporated by some unknown means to form a thick homogeneous paste.—*Dr. Lampert*.

MITTEL GEGEN TOLLWUTH—CURE FOR HYDROPHOBIA (Marcus).—Meloe majalis dried and powdered with sage, rue, dog-rose root, yew-wood, myrrh, of each equal parts. A teaspoonful to be taken morning and evening for three days.

TOLMA—A HAIR RESTORER BUT NOT A HAIR DYE—(Gustav. Ziegler, Heilbronn).—Lead acetate, 6 g.; common glycerine, 32 g.; milk of sulphur, 2 g.; rose water to 200 g. 2s.—*Hager*.

TOPIQUE INDIEN (Colmet d'Ange, Paris), for tooth-ache and facial neuralgia. Two bottles. No. 1 contains a tincture of star anise mixed with a few drops of peppermint oil and coloured with aniline red. No. 2 contains 12 little cotton bags as big as a French bean, filled with bruised peppercorns. 2s. 9d.—*Wittstein*.

WADE'S DROPS.—Benzoin, 90; storax, 60; tolu balsam, 30; aloes, 15; spirit, 1,000.—*Hager*.

MITTEL DAGEGEN TRUNKSUCHT—CURE FOR DIPSO-MANIA (H. Gunther, Altona).—Tincture of asarabacca and cascarilla.—*Wittstein*.

—(Frl. Kretschmer, Berlin, Oberwasserstrasse 13).—A powder to be taken alone, or with tea, coffee, or chocolate. Sodium bicarbonate (*vulgo* Bullrich-salt), 75; tartaric acid, 10; flowers of sulphur, 8; asarabacca, 5; peony root, 2. 6s.—*Hager*.

—(J. H. Rungel, Wandsbeck).—An aqueous solution, containing 3½ per cent. of tartar emetic and ½ per cent. of a neutral organic body. 250 g., 8s.—*E. Harms*.

—(F. Vollmann, druggist, Guben).—100 pills, composed of iron sulphate, 3.8 g.; gentian extract and gentian powder, and 40 g. of powder of gentian alone. 6s.—*Hager*.

TUNICARE.—A secret photographic material. A diluted watery solution of albumen, containing a little alcohol. 100 cc., 3s. 6d.—*J. Schnauss*.

TUTAMENTUM (Dr. Hess, Berlin).—Protection against contagion for both sexes. Glycerine, ½; water, 5½; eau de Javelle, 1½; camphor spirit, a trace. 125 g., 1s.—*Hager*.

UNIVERSAL-ARZNEI—UNIVERSAL REMEDY (Belliot, Paris).—For scrophula, syphilis, gangrene, scurvy, and the like. Arsenic, 41; sulphuric acid, 29; chalk, 28; organic matters, 2.—*Vogt*.

UNIVERSAL BALSAM (Grebehahn, Reichmannsdorf).—For all diseases. A solution of sulphuretted linseed oil (sulphur balsam) in linseed oil. 12 g., 7d.—*Hager*.

—(Joachim, Berlin).—For gout, rheumatism, &c. Palm oil, 3; mixed with soda lye, 1; and a little lavender and rosemary oils. 80 g., 1s. 6d.—*Hager*.

—(Nohascheck, Mainz.) Alleviates all diseases. Oleum terebinthinas sulphuratum. 8 g., 1s. 8d.—*Wittstein*.

UNIVERSALGEIST—UNIVERSAL SPIRIT (Wildbrand, Berlin).—For pains in the limbs, gout, &c. Common salt, 2; camphor, 2; ammonia solution, 30; spirit, 180. 210 g., 1s. 6d.—*Schädler*.

UNIVERSAL GICHT UND BLUTREINIGUNG'S-THEE—UNIVERSAL GOUT AND PURIFYING TEA (R. Mayr, Gleisdorf, Steiermark).—A parcel of blue paper containing 4 cylindrical packets of very finely cut species. The ingredients are *Carex arenaria* root, liquorice root, juniper wood, sassafras, logwood, guaiacum wood, *Rumex acutus* root, herbs of hyssop, mallow, marsh mallow and ground ivy, locust beans, bittersweet, juniper berries, of each about 10 p.; senna leaves, *Triticum repens*, of each 25 p.; cream

of tartar in pieces the size of mustard seeds, 9 p. Besides these there are casual fragments of other drugs, as canary seeds, mallow seeds, Iceland moss, straw, and the like. 1s. 7d.—*Hager*.

MISCELLANEOUS FORMULÆ.

SALICYLIC ACID SOLUTION.—An American dental paper commends the following formula for a solution of salicylic acid:—

Salicylic acid	640 grains
Citrate of potash	960 „
Glycerine	3 fluidounces
Simple elixir to	1 pint

Dissolve the citrate in the glycerine by the aid of gentle heat, then stir in the acid, continuing the heat till it is completely dissolved, when cool add the elixir, and strain. The solution contains 5 grains salicylic acid to each fluid drachm, and may be mixed with water to any extent without precipitation. The writer recommends the solution as a disinfectant for hollow teeth, spongy gums, and, in cases of fetid breath, for washing the mouth or gargling the throat; in the latter cases in a diluted form.

Simple elixir is thus made:—

	Parts
Oil of orange	5
Oil of cinnamon	2
Alcohol	376
Sugar	958
Distilled water	1,886

ALBUMEN WATER.—Recommended as a good substitute for milk and beef tea, in cases where these substances disagreed with the patient, or could not be obtained. The preparation is largely used by the French. It is made by dissolving the white of one or more eggs in a pint or two of water, sweetening with glycerine, and flavouring with orange-flower water. It may be taken cold and used *ad libitum*. It is an excellent food in typhoid fever and typhoid dysentery.

REMEDY FOR HAY FEVER.—A correspondent of the *New York Sun*, who has been subject to hay fever in its worst form for years, records for the benefit of fellow-sufferers the relief she has obtained from the following compound, the recipe for which she found in the columns of a newspaper:—Into a 4-oz. wide-mouth bottle, half filled with cotton, and having a close stopper, put the following mixture:—

	Drachms
Carbolic acid	2½
Aqua ammonia (specific gravity 0.960)	3
Distilled water	5
Alcohol	7½

Inhale through the nostrils.

TINCTURE OF INSECT POWDER.—A concentrated tincture of insect powder is recommended as an insecticide by Finzelberg. It may be prepared by digesting one part of Persian insect powder in ten parts absolute alcohol. It can be applied by an ordinary perfumery atomiser. When thus used in closed rooms, all flies soon drop dead; while scattering it over linen, &c., acts as a protection against fleas and other vermin.

INSTANTANEOUS SILVERING POWDER.—

Argenti chloridi	3.0
Potassii bitartratis	20.0
Sodii chloridi	15.0

M.

A portion of this powder is moistened with water, and with a piece of blotting-paper rubbed on the clean metallic object. The latter is thereupon rubbed with a piece of cotton upon which precipitated chalk is dusted, then washed with water, and polished with a dry cloth.

LIQUOR VIOLARUM ODORAT.—C. Bernbeck (*Pharm. Centralt.*, No. 13, 1881) recommends to take 100 grammes of fresh violet flowers, free from the calices, bruise them in a stone mortar, adding gradually 50 grammes alcohol. Let the tincture macerate for six or eight hours in a glass or

porcelain vessel, and press. After pressing, straining, and washing the mass, make up with distilled water to 100 grammes, and after filtration keep the liquid in vials of which the corks have been covered with salicylated paraffin. This liquor, in the proportion of 1 to 9 of simple syrup, 1:36 sp. gr., yields a syrup of beautiful violet colour and odour. The alcohol coagulates the vegetable albumen, and perfectly dissolves all the cyanin and violin of the flowers.

CHEMICAL FOOD FOR PLANTS.—The *Pharm. Zeit.f. Russ.* recommends the following formula:—

	Parts
Sulphate of ammonia	4
Nitrate of potash	2
Sugar	1

Mix.

About 40 or 50 grains of this powder should be added to a gallon of water and applied to the plants once or twice a week.

FLIES AND HORSES.—Dr. J. J. Ridge, of Enfield, writing to the *Daily News*, recommends, to prevent the torment inflicted by the flies on horses, application to the latter, before harnessing, of a mixture of one part crude carbolic acid with six, or more, parts of olive oil. This should be rubbed lightly all over the animal with a rag, and applied more thickly to the interior of the ears and other parts most likely to be attacked. This application may need to be repeated in the course of the day, but while any odour of the acid remains the flies decline to settle, and the horse is completely free from all their annoyance.

ANTI-MOSQUITO FUMIGATING PASTILLES.—

	Parts
Charcoal	500
Saltpetre	60
Carbolic acid	40
Per-fan insect powder	250
Tragacanth	q. s.

Pharm. Zeitung.

CIDER PRESERVATIVE.—F. L. Slocum (*Am. Journ. Pharm.*) has analysed a cider preservative, sold in America at \$2 per ounce, and finds it to consist of salicylic acid simply. One ounce is sufficient for 32 gallons of sweet cider, and will keep it sweet for 6 or 12 months. It is, he says, far superior to bisulphite of lime.

STARCH GLOSS.—

	Parts
Spermaceti	1
Gum senegal	1
Borax	1
Glycerine	2½
Water	24½

Two or three teaspoonfuls to be added to ½ lb. of boiled starch.—*Faerh. Must. Zeitung.*

DICHOIC DYES.—It is stated that a Swiss house will soon introduce into commerce certain dichroic colours just prepared by Weselsky and Benedikt. Silk dyed with these colours appears, it is said, as a brilliant blue by daylight, and as a splendid rose by gaslight.

IMPROVED STYPTIC COLLOID.—

	Parts
Collodion	100
Carbolic acid	10
Tannin	5
Benzoic acid (from the gum)	5

Mix in the above order, and perfect solution is effected. This preparation is of a brown colour, and leaves on evaporation a strongly adherent pellicle. It instantly coagulates blood, forming a consistent clot, and a wound rapidly cicatrises under its protection.—*Louisville Medical News*, May 28.

TO REMOVE BLACK INK FROM PARCHMENT.—Moisten the spots first with a strong solution of oxalic acid, then with a clear saturated aqueous solution of fresh chloride of lime (bleaching). Absorb excess of the liquids from the paper as quickly as possible, with a clean piece of blotting-paper. Repeat the treatment if necessary, and dry thoroughly between blotting-pads under pressure.—*Scientific American*.

DEPILATORY POMADE.—

Carbonate of soda	1 drachm
Quicklime	½ drachm
Charcoal powder	8 grains
Glycerine (neutral)	1 fl. drachm
Lard	7 drachms

After applying this pomade to the affected parts for 10 or 12 days the skin takes a rose tint, and the hairs may be drawn out without pain.—*La Presse Medicale*.

AN IMPROVED DIACHYLON OINTMENT.—Prof. Duhring (*Phil. Med. Times*, May 7), after observing on the little success that has attended the attempts to prepare this ointment in a satisfactory manner, states that a pharmacist of Philadelphia has succeeded in preparing it of a uniformly superior quality after long experimenting, the ointment prepared from Hebra's directions not having answered expectations. The following formula furnishes an ointment containing a definite amount of oxide of lead, which, with the use of litharge, cannot be estimated:—One part of freshly-precipitated (from acetate of lead) pure white hydro-oxide of lead is rubbed into two parts of water, and mixed well with 6 parts of the best Lucca olive oil. It should be stirred for about two hours over a hot-water bath near to boiling-point, and cooled with constant stirring until the proper consistence is obtained. While cooling, a drachm of oil of lavender to the ½ lb. of ointment is added. This ointment contains the oleo-stearate of lead, has a neutral reaction, and can be kept in good condition for some time. It is a smooth, whitish, elegant preparation, and is altogether more desirable than that made from any other formula.—*Medical Times and Gazette*.

THE CHEMICAL SOCIETY.

Thursday, July 16.

PROFESSOR ROSCOE, President, in the chair.

The following papers were read:—

"On the Isomeric Acids obtained from Coumarin and the Ethers of Salicylic Aldehyde," by W. H. Perkin. The author has studied the action of various agents on these bodies. The α body (from coumarin) is converted into the β body by heat or light. In general the effect of chemical action on the α acid is to convert it into the same compound as that yielded by the β body. Bromine forms an exception, and two isomeric dibromides were obtained. The author concludes that, as the α body has a lower boiling-point, density, refractive index, and is less stable than the β acid, it is probable that its molecules are further apart, and that the difference of distance is probably between the radical and the hydroxyl. The derivatives from propionic and butyric coumarin were studied.

"Notes on Naphthalene Derivative," by H. E. Armstrong and G. Lowe. The authors have continued their investigations as to the action of sulphuric acid on naphthalene, and confirm their previous statement that three and not two disulphonic acids may be obtained. An isomeric β naphthol-sulphonic acid was prepared by dissolving β naphthol in cold concentrated sulphuric acid.

"On the Synthesis of Ammonia," by G. S. Johnson. The author re-asserts that pure nitrogen, free from nitric oxide, when passed with hydrogen over spongy platinum, forms ammonia. If, however, the nitrogen be previously passed through red-hot asbestos no ammonia is formed: this indicates the existence of an active allotropic nitrogen analogous to ozone.

"On the Alkaloids of Nux Vomica," by W. A. Shenstone. The author has prepared pure brucine, but concludes that the so-called Igasurin has no existence.

"Notes on Photographs of the Ultra Violet Emission Spectra of Certain Elements," by W. N. Hartley.

"On the Sulphates of Aluminium," by S. U. Pickering.

"On Two New Oxides of Bismuth," by M. M. P. Muir. Bi_2O_3 and Bi_2O_5 , prepared by the action of aqueous potassium cyanide on a hot nitric acid solution of bismuth nitrate.

The Society then adjourned over the summer recess.

THE OPIUM MARKET.

SPECIAL LETTER FROM SMYRNA TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

OUR friend, Mr. Joaquin Marti y Artis, your former Correspondent in Smyrna, has left this city to establish a business at Norfolk, Virginia, and has transferred to us his commercial affairs here, as we advised you by circular dated May 26. In accordance with your wish we shall now recommence the letters furnishing you with information on the opium market, and we hope your readers will take the same interest in them as formerly.

The last campaign has entirely deceived the best-founded anticipations, and prices have fallen to a point which we were far from expecting, in view of the deficiency of the harvest of 1880. It is a fact that the actual yield did not exceed the estimates which were given you, and between August and October of last year prices advanced to 250 piastres the chequi. Since the latter date they have declined. The diminution of the consumption which was reported alarmed some of the speculative holders, so that in January last quotations stood at 180 piastres. A reaction followed in February, carrying the price to 210 piastres, but from then very favourable reports of the new crop began to arrive, causing complete demoralisation among the holders, and prices rapidly fell to 135 piastres, which is the present quotation for last year's product.

This season's yield, according to all appearance, will be one of the most abundant ever known. The sowings were enormous, in consequence of the cheapness of the poppy seeds and the extreme dearness and scarcity of all other grains. The high prices of last year further encouraged growers to sow opium, and their crops have been favoured by rains just when necessary, and by exceptionally propitious temperature, so that there is prospect of a supply which was, perhaps, scarcely hoped for even by the growers. The following estimate of the yield is based on information obtained from the best sources down to this date:—

	Cases	Cases
Malatia, &c.	1,500	to 1,600
Tokat, Zile, &c.	450	600
Angora, Eskisheir, Katsarie, &c.	450	500
Salonica	700	800
Karahissar, &c.	2,300	2,500
Koniah, &c.	4,300	4,600
Bogaditch, &c.	70	800
Ouschak, Simav, Yedig, Kutaya, &c.	1,000	1,200
Neighbourhood of Smyrna	500	600
	11,900	13,200

Compared with the product of distant districts, the Smyrna yield is small, as rains in May, at the moment of the incision of the poppies, caused a loss estimated at from 50 to 80 per cent. These rains, which were so injurious in the country round Smyrna, were, on the other hand, most favourable in the colder, and consequently later, regions.

In the early part of this month (June), when the information as to the probable yield was not so complete, contracts were concluded for the delivery of 5,000 chequis at 125 to 127 ps. Soon after, on receipt of more favourable news from the interior, the market became heavy, and sellers sought in vain for more business at that figure. Some little available stock was sold for America at 125 ps., but the continuance of favourable reports caused sellers to be still more eager, and we saw 20 cases of available stock disposed of at 120 ps., and 4 at 117 ps. To-day available might probably be purchased at 115 ps.

The arrivals up to the 27th inst. had reached 280 cases. Our opinion is that, as soon as our stock begins to accumulate, prices will recede, unless the low prices should tempt renewed speculation or largely-increased consumption, in which case prices might be maintained at about 110 to 115 ps.

It is also probable that the prices may justify shipments to China. If that should happen, and China should relieve our stock of 3,000, 4,000, or 5,000 cases, besides what might be taken speculatively, some slight reaction upwards might occur.

The general opinion, however, in view of the large production, is that, unless totally unforeseen circumstances should happen, the price of this year's opium will not exceed from 100 to 120 ps.

June 29.

BARRY & Co.

NOTES FROM GREECE.

BY DR. XAVIER LANDERER.

White and Black Sesame Seeds.—Chalba, or chalwa, a Lenten food beloved by all Orientals, is prepared from white sesame, the seeds of *Sesamum orientale*. Many thousands of wooden chests of this chalwa are sent to Athens from Syra, where great manufactories have been established. By the Orientals the plant *Sesamum orientale* is named *Man-man*, or "gift of heaven." Bakers bestrew their bread with the seeds, which contain a fatty oil. Beaten with a few almonds and a little sugar and water they form an agreeable sumada, or emulsion, called sesame and almond milk.

"Maurokukki" is the name of the seeds of *Nigella sativa*, called also black coriander. They are used as spice for strewing on bread and pastry. In Asia Minor these seeds are called "Mauromyrodia," "black aromatic seeds," and are strewn on butter to make it well tasting.

Neglect of the Collection of Camomile Flowers.—Many thousand kilos of camomiles could be collected in Greece in the months of March and April. At present the poorer women and girls gather only as many as they can sell to the apothecaries, and the greater part is left to die and disappear.

These camomiles cost 15 lepta's, or 1½d. an okka of 2 84 lbs., or 4s. 3d. per cwt. They are aromatic, but neither bitter nor styptic. Under our sunny heavens plants develop more aroma, and in colder climates more bitterness and astringency.

Mucilage from Asphodel Corms.—In the East a mucilage containing dextrine is prepared for shoemakers and bookbinders by strongly roasting the corms of *Asphodelus bulbosus*, called "Sphendakla." The mucilage, or rather the powder from which it is prepared, is called "Tsinisse" in Turkish.

Alcohol can also be prepared from these starchy corms. The *Asphodel* was, and still is, a funeral plant. It is found in all Oriental churchyards, and has not entirely disappeared from the funeral feasts. In the oldest Hellenic times it was sacred to Persephone and to mourners. It was also a wonder plant, or *heroicon*, a remedy for snake-bites and scorpion-stings, and was worn as a charm against poison and enchantment.

On Absinth.—One of the most important of the folk medicines of the Orientals is the wormwood plant, *Absinthium*. Everybody buys the fresh plant, called *Apsifra*, from the botanologists, and prepares from it a wine called *Apsindites rimum* by the ancients. The name "Absinthium" is derived from the Greek name "Apsintion," which means a plant which, on account of its bitterness, may be drunk with wormwood or not [!]. The plant is also called "Bermiel."

Up to the time of writing Greece has escaped both phyloxera and trichinosis.

A Folk Medicine for Chronic Cough.—A remedy which, in many cases, has produced remarkable results is the root of *Urtica pilulifera*, the Roman nettle, called *Knidi* by the old Hellenes and *Tsuknida* to-day. The name *Pilulifera* was suggested by the pill-like clusters of fruit. The name *Urtica* is derived from the verb *urere*, to burn, and is as applicable to the plant as its other name, *Serpentes vegetabiles*, vegetable snakes. The seeds of this *Urtica* are collected and sold at a high price (5f. to 6f. an okka), and a decoction of them is an approved medicine for increasing the secretion of milk in nursing mothers.

Juniper Berries.—The *Juniperus communis*, so common in Germany, is only found growing sparsely in a few islands of the Grecian Archipelago. In place of its berries, the scarlet fruit of *Juniperus phœnicea* (Cypress juniper) is found in the druggists' shops. The plant was named *Arkeftos*, and *Arneudos* by the ancients.

Equally rare in Greece is the *Juniperus sabina*, whose place is supplied in the drug-shops by the leaves of *Thuja articulata*, or *Arbor vita*. From the massy root of this tree furniture used to be made.

Adiantum Capillus Veneris.—This plant, called *Frauenhaar*, maiden's hair, &c., is one of the plants most commonly used in the East as a tea. All the women use it, and regard it as a specific for female diseases. It is called *Polytriche* by the Greeks.

Notes for Wine-makers.—To improve the flavour and aroma of red or white wine make an alcoholic tincture of apple-peels, in which the aroma resides, and add more or less of this to the wine with caution and judgment. I name this aroma not *anethol*, but *mylanthol*, from *mylon*, the name of the apple.

The apple, on account of its rounded form, was the emblem of fullness or perfection; the *Reichsapfel*, the imperial globe of the Emperor, signifies his complete sovereignty. The apple was also the symbol of love; and in later times it has been asserted that Hercules brought the apple from the gardens of the Hesperides—not oranges, but the golden apples or quinces. To keep wine from souring a quince (*kydonia*) with cloves (*caryophylli*) stuck all over it should be placed in the cask. This is well tried, and thoroughly successful.

Cataplasmata used in Greece.—The boiled sonchus plant (sow thistle), named *sochios*, is applied as a poultice to the breasts of wet-nurses and mothers to increase the flow of milk. This use of the plant was known to Dioscorides. Pliny also says, "*Sonchus lac nutritium auget et erosiones stomachi lenit.*"

According to the Greek etymology the name *Sonchus* is from *zōn chēin*, "life-expending." [It is now more generally believed that the word is of Egyptian origin, or that it comes from some other source not Greek.] The dried milky juice of the plant much resembles *lactucarium*.

Another cataplasm highly esteemed for promoting suppuration is made from red caviar and mustard-seed, and called *Kardali* in Turkish. It has been found useful in Oriental plague and malignant furuncle.

Salt as a Poison for Fruit Trees.—For several years I was engaged before the tribunals of Athens investigating a case in which peach and apricot trees, though loaded with blossom in spring, had died without apparent cause. It was found that a malignant neighbour had scattered several pounds of common salt round the trees, and had then poured boiling water over it to dissolve it.

It is very interesting to note, on the other hand, that a little salt spread from time to time on the soil in which apple-trees are growing, especially when rain follows soon after, not only increases the crop of fruit, but also improves its flavour.

Tobacco a Poison for Silkworms.—One evening a pupil in the Agricultural School near Nauplia sprinkled snuff, called *Tanotikos* *tambakos*, on the mulberry-leaves provided for silkworms. Next morning 30,000 of the worms were found dead. The pupil was expelled from the school, and punished by fine and imprisonment.

Poisonings in Greece and the Levant.—Though the sale of poisons is very strictly prohibited by law, poisoning cases not seldom occur in all parts of Greece, and are frequent in the Levant. Yellow and white arsenic, known as "*Pontikofarmakon*" or rat poison, can be purchased from small dealers (*pakalides* *pantopolen*) on declaring that it is to be used for destroying vermin. Not long since a priest was poisoned by mixing white arsenic with the wine which he was to drink in one of the church festivals. Within a short time four girls and maidservants have been poisoned by corrosive sublimate, which, under the name of *sulima*, can be bought from old women for making ointments and cosmetics (*psimithia*). The first recorded case of poisoning by phosphorus has occurred recently. An unfortunate French girl obtained the poison by washing a large number of matches. She died after three days of horrible agony. Poisonings by cyanide of potassium are almost unknown. Only two persons, who were connected with photography, have used this poison. Opium (*afion*) is often used with fatal effect. Other poisons are unknown. In Egypt *Chaschish* or *hashish*, a preparation of Indian hemp, is used as a poison, and as an intoxicant to produce the *Chaschis* *Theriaklides* or *Hasehish* passion.

The *Nymphaea Nuphar* (*Nuphar lutea*, or yellow water

lily, in Greek *Nenupharion*), in the form of a confection of the leaves made with sugar is a remedy for coughs highly prized in the East.

Anthoreron and Mythoreron of the Island of Chios.—*Anthoreron* denotes the distilled water of the flowers, *mythoreron* the distilled water of the leaves and leaf-buds, of the citron and orange. Both are prepared in Chios in large factories, and are exported to Europe. In some factories the fresh flowers are used, in others the flowers are salted, and, indeed, such salted flowers are themselves exported to Europe, and used in the preparation of *Aqua naphæ*. The distilled water yields a certain quantity of *antholadon*, or oil of neroli, which is collected with great care. To hasten the cooling of the water and the separation of the oil the vessels containing the distilled water are sunk in the earth, and water is sometimes dashed over them. The water, before exporting to Europe, is often distilled with two, three, or four quantities of flowers, to make double, triple, or quadruple water. This is passed through the Custom-house as "*Aqua e floribus citri*," and pays the same duty as the simple water, while it bears dilution with three or four times its bulk of plain water. In the East the *mythoreron*, the water from the leaves, is sold at a much lower price than the *anthoreron*. The Jews of Thessalonika, however, falsify it by shaking it with a few drops of neroli oil, and export it to Marseilles and England as "*Eau de fleurs d'oranges*." The Jews of Thessalonika—called *Tsifut* in Turkish—devote themselves to the falsification of all kinds of natural products. They adulterate *salep*-powder with meal, and even, as I hear, with *tsinisse*, or the dextrin-containing cement made in Asia Minor, by roasting the bulbs of *Asphodelus bulbosus*. In the month of August the fresh opium is sent from Smyrna and Asia Minor to Thessalonika in tin boxes. It is a soft fermenting paste. I and others have often found such opium to be adulterated with *salep*, and even with seedless raisins, beaten to a pulp. In the bazaars of Thessalonika a so-called Macedonian saffron is offered. It is adulterated with the flowers of *Carthamus tinctorius* and similar yellow-flowered Compositæ.

Medical Gleanings.

ANTISEPTIC SURGERY.—A French surgeon, punctilious in his Listerism, was a professional witness at a recent duel. When the adversaries were ready to commence the action the surgeon stepped forward and, taking from his pocket a solution of phenic acid, dipped the point of each sword into it. "Now then," he said, "proceed; you may may kill each other, but you are protected from purulent infection."

THE ANTI-VIVISECTIONISTS are sufficiently in earnest in this country, but they hardly let their passion run away with their reason so far as did the president of the American Society for the Prevention of Cruelty to Animals (Mr. Henry Beigh), in an address delivered by him this year in Albany. The following is a quotation from his speech:—"As another proof of the profane extremes to which these dissectors of living animals will go, Robert McDonald, M.D., on being questioned, declared that he had opened the veins of a *dying person*, remember, and had injected the blood of an animal into them many times, and had met with brilliant success. In other words, this potentate had discovered the means of thwarting the decrees of Providence, where a person was dying, and snatching away from its Maker a soul which He had called away from earth!"

SALICYLATED STARCH IN ECZEMA.—Kersch (*Wiener Medicinisches Blatt*, No. 1, 1881) strongly recommends salicylated starch in the treatment of eczema. It is prepared by gradually mixing small quantities of pure starch with a 2 to 3 per cent. alcoholic solution of salicylic acid. When the starch has settled, the quantity of the solution present should be sufficient to furnish a layer over it. The residual solution should then be poured off, the salicylated starch pressed in stout muslin, and dried at a temperature of 176° F. The eczematous patches are first deprived of their scales by the use of a 2 per cent. solution of carbolic

acid and potash soap; then dried with absorbent antiseptic cotton, subsequently moistened with a 2 per cent. alcoholic solution of salicylic acid, and then thickly covered with the salicylated starch. The remedy, even allowing for Kersch's enthusiasm, seems to have acted well, and is worthy of more extended trial.—*Chicago Medical Review*.

AN UNFORTUNATE FORTUNE.—A poor old doctor named Tachar, 66 years of age, killed himself in Paris a few weeks ago by throwing himself from the sixth storey of a house in the Rue Servan. About thirty years ago an aunt left him a fortune of 800,000f. Unfortunately he was acquainted with an enthusiastic inventor, by whose assistance all the money was melted away in the production of new machines which never succeeded. The inventor died in a hospital, and the doctor lived on in poverty until the war, when he got an appointment in an ambulance. He rendered distinguished services, and received the Cross of the Legion of Honour. The war over, with his little savings he again sought the perilous path of invention. Nothing succeeded; he had reduced his property to a little furniture and had got into debt; the officer was coming upstairs to seize what he had, and the poor old man escaped in the way we have indicated.

PILOCARPIN AND PHYSOSTIGMA ANTIDOTES TO BELLADONNA.—Mr. N. Grattan, L.R.C.P., of Cork, records in the *Lancet* (June 11, 1881) a case of poisoning by belladonna which seemed to yield very promptly to treatment by pilocarpin. The patient, a woman 42 years of age, took by mistake 3ij. 5ij. of lin. belladonna, B.P., at 9 P.M. She had eaten a hearty dinner about four hours previously, which retarded the action of the poison. At 10.45 P.M., when he saw her, she was in a profound stupor, and showed signs of belladonna poisoning—pupils widely dilated, face swollen and bluish, pulse very low. Emetics were given, which had a momentary good effect. Cold affusion to the head and flagellation over the heart was continued till 3 A.M. Then one-fifth of a grain of pilocarpin was subcutaneously injected every fifteen minutes, to three doses, when consciousness began to return. One more similar dose completed the cure, though she was two or three days before she had entirely recovered. The pilocarpin did not cause the least perspiration. Curiously, in the *British Medical Journal* of the same week there is an account by James Hudson, M.B., of Nelson, New Zealand, of a case of poisoning by atropia, in which, after seven and a half hours of unconsciousness, almost immediate relief was afforded by the subcutaneous injection of solution of extract of physostigma.

NITRE TABLETS FOR ASTHMA AND INSOMNIA.—Dr. Wm. Murrell, in the *British Medical Journal*, writes:—There can be no question as to the value of fuming inhalations in the treatment of asthma. The ordinary nitre-paper often fails, because it is not strong enough. For some time past I have been in the habit of using very thick and strong nitre-papers, which may be called "nitre tablets." They contain both chlorate and nitrate of potash. Each consists of six pieces of white blotting-paper, about 6 inches square, and they are made by dipping them into a hot saturated solution of nitre and chlorate of potash. Before the pieces are quite dry they may be sprinkled with Friar's balsam, spirit of camphor, tincture of sumbul, or some aromatic. The nitre-paper so prepared is as thick as cardboard, each piece consisting of six pieces of blotting-paper, closely adherent, and covered all over with crystals of saltpetre and chlorate of potash. The door and windows having been closed, the tablet is placed on a fire-shovel or piece of metal of some kind, and folded down the middle, so as to make it like a tent or the cover of a book. When lighted at each end it burns very quickly, throwing out a flame often 4 or 5 inches long, and giving rise to dense volumes of smoke. The asthmatic patient almost immediately obtains relief, and drops off into a quiet slumber, from which he awakes refreshed. These tablets often succeed when the ordinary nitre-papers do no good. They nearly always induce sleep, and I have used them with success in cases of insomnia when most of the ordinary remedies have failed. Large pastilles composed of equal parts of nitre and lycopodium are also useful in asthma.

TREATMENT OF GONORRHOEA.—Dr. Scudder, editor of the *Eclectic Medical Journal*, of Cincinnati, says he has dropped the copaiva mixture and nitrate of silver injection in treat-

ment of gonorrhoea, and only in an exceptional case indulges a man in an injection of sulphate of zinc, to "get up an action." "I cannot call my present treatment an abortive one, and it is not a very short one, but it has the element of comfort in it, and no danger of stricture, gleet, or orchitis. My patient has *cannabis indica*, *macrotys*, *gelsemium*, and *veratrum*, as indicated. It is usually:—

Tinct. <i>cannabis indica</i>	..	..	..	..	x gtt.
Tinct. <i>macrotys</i>	..	..	..	..	xx gtt.
Water	..	..	..	..	3iv.

A teaspoonful every three hours.

In many cases I should use no injections. If used it would be at first:—

Borax	..	..	..	..	xx grs.
Morphia	..	..	..	..	v gr.
Water	..	..	..	..	3iv.

Or

Boracic acid	..	..	..	..	x grs.
Water	..	..	..	..	3iv.

Or

Thymol	..	..	..	..	iv to x grs.
Alcohol	..	..	..	..	3ij.
Water	..	..	..	..	3iv.

In the advanced stage of the disease, when there is a free discharge, I prefer—

Berberina, or sulphate of hydrastia	..	..	viii gr.
Water	..	..	3iv.

Use as an injection twice daily."

CHINESE PHYSICIANS.—An American lady missionary, Dr. Kate C. Bushnell, gives the following account of Chinese medicine in the *Chicago Medical Journal*. The native physician of China is a member of the literary class, and well versed in the philosophy of Confucius; of medicine he is not required to have any special knowledge. There is a law by which physicians and druggists are held responsible for errors in prescriptions, but the native never takes advantage of it. The creation of a physician generally comes about in the following manner: A Chinaman is seriously ill; he sends for the literary relative (or relatives, as the case may be) of the family for advice. The literary gentleman searches all the works on medicine at his disposal, and treats the patient according to directions. Should that literary man happen to be successful in his treatment his fame is spread abroad, and ever after that he is consulted as a specialist in that particular disease. There is no doubt that many a man of the most unreliable character makes his way to the front of the medical ranks in this way, and doubtless many a life is sacrificed thereby. The last resort in serious cases of sickness is that of administering fresh, warm, human flesh to a dying person, and it is said there are many monuments in China erected to the memory of women who have allowed themselves to be butchered for their husbands, brothers, or fathers. I have yet to learn of a case where either the dying man or person from whom the live flesh was cut recovered; unfortunately, however, the physician usually survives the operation. Fortunately this custom is not a common one.

CHAULMOOGRA OIL AND GYNOCARDIC ACID.—Dr. Wyndham Cottle writes in the *British Medical Journal* on chaulmoogra oil and its active principle, gynocardic acid, as internal and external remedies in various forms of skin diseases. Gynocardic acid he finds preferable for several reasons, as it rarely produces nausea, can easily be given in the form of pills, and is more uniform. Both the oil and the gynocardic acid are used either as external or internal remedies, the oil being best taken in perles, and the oil and the acid best applied as ointments in combination with vaseline. Dr. Cottle seems to have found the medicines most serviceable as local applications in eczema. In eczema of the face, and when it shows itself in dry patches, he has found an ointment of gynocardic acid of from 15 to 25 grains to the ounce of vaseline almost a specific, when most of the ordinary applications in use only served to aggravate the local mischief. The ointment should be applied three or four times daily, so as to keep the affected parts lubricated with it. Again, in eczema of the hands, such an ointment is the most generally useful application with which he is

acquainted. In the acute form of this disease, or where there is much discharge, the good effects following the use of chaulmoogra oil or gynocardic acid locally applied are not so marked. For internal administration it is well to begin with about 4 minims of the oil, or $\frac{1}{2}$ grain of the acid, taken after food twice or thrice daily, and gradually increased to $\frac{1}{2}$ drachm to 1 drachm of the oil, or 1 to 3 grains of the acid. An aperient should be given at the same time, if necessary. The oil may be enclosed in perles, or given in emulsion. It is convenient to have the gynocardic acid made into pills containing $\frac{1}{2}$ grain of the acid, with 3 grains of extract of gentian, extract of hops, or conserve of roses. To commence, one such pill may be given thrice daily. The amount may be gradually increased to three or four pills for each dose. The writer adds that the constitutional effects of the drug may be produced by inunction, and he suggests that a soap in which gynocardic acid was incorporated would probably possess much of the soothing and remedial influence of the gynocardic acid, and prove useful in the treatment of many forms of skin disease.

TREATMENT OF WHOOPING COUGH.—Some correspondents of the *British Medical Journal* have contributed the results of their experience in regard to whooping cough. Dr. Spencer T. Smyth (Forest Hill) has pursued the following plan with most marked benefit:—At first, the various secretions must be attended to. It may be desirable to administer an emetic of sulphate of zinc, followed by a mild mercurial purge. The diet must be of a light nutritious character, easy of assimilation; a warm bath should be given to restore a healthy action of the skin; and warm suitable clothing should be used. Secondly: for a few days only, bromide of potassium, with citrate of potash, ipecacuanha wine, and glycerine, should be given until expectoration becomes free. Thirdly: then give sulphate of quinine in milk every four hours, in doses, according to age, of half a grain and upwards. A belladonna plaster should be applied to the chest, and linimentum terebinthinæ aceticum should be freely applied across the epigastric and scapular regions night and morning. Carbolic acid should be inhaled three or four times daily, and the sleeping-room should be thoroughly impregnated with its fumes. During the day the patient should change the room, and, if the weather permit, he should be taken into the open air, being guarded against the cold easterly breezes. In order to complete convalescence he should change his residence for awhile. No stimulants of any kind are to be administered.—Dr. Carey Coombs (Castle Carey) has found most success from inhalation of belladonna and bromide of potassium in spray from Siegle's steam spray-producer. The formula he used was: Extr. bellad. gr. vj; ammonii bromidi gr. xx; potassii bromidi gr. xl in aq. $\mathfrak{z}$ ij. This lotion was put in the bottle of the spray apparatus, and inhaled by the patient for five or ten minutes, once or twice daily, according to the severity of the case. The pupils should dilate; this will determine the amount of belladonna in the lotion. No other medicine was needed by the patient thus treated.—Mr. C. R. Illingworth (Clayton-le-Moors) has found carbolic acid, applied locally and given internally, to answer admirably. For local application he uses the glycerine of carbolic acid, of the strength 1 in 30, applied daily with a laryngeal brush. Internally, for a child two years old, he prescribes a teaspoonful of the following mixture every four hours: Soluti acidi carbol. (1-20) $\mathfrak{z}$ ss; tinct. belladonnæ $\mathfrak{z}$ ss; tinct. camph. co. $\mathfrak{z}$ ss; syrupi rhæados $\mathfrak{z}$ ij; aquam ad $\mathfrak{z}$ ij. He also recommends that cod-liver oil and wine should be given three or four times a day. He never orders any special diet.—Mr. W. W. Morris (East Bridgford) has largely used a combination of ether, valerian, artificial musk, and origanum, during the last 25 years with uniform success. If taken at the commencement of whooping, the first dose generally cures; or, if a week or two has elapsed, two or three days generally suffice. His druggist (Mr. Sneath, of Newark) supplies them in a nicely-sweetened mixture ready for dispensing. It merely requires diluting with three times as much water.—Mr. C. J. Evans (Northampton) has found the best results from the subjoined prescription, and does not recommend any special form of diet: Potassæ Litratis gr. v; vini ipecacuan. $\mathfrak{m}$ v; liquor ammoniæ acetatis $\mathfrak{z}$ ss; tincturæ belladonnæ $\mathfrak{m}$ v; acidi hydrocyanici diluti $\mathfrak{m}$ ij; aquam ad $\mathfrak{z}$ ss. This is for a child of three years and upwards; one to two table-spoonfuls under that age.

ABSTRACTS OF SPECIFICATIONS.

FOR permission to print the following we are indebted to the courtesy of the *Engineer*:—

4356. Aerated Beverages, L. Shaper.—Dated October 25, 1880. 4d.

This consists in the manufacture of aerated beverages by the combination of citrate of thein, or thein or other salt of thein with water charged with carbolic acid gas, and with in addition, if desired, suitable sweetening or flavouring materials.

4259. UTILISING PHOSPHATE OF ALUMINA TO OBTAIN PHOSPHORIC ACID, A. Gutensohn.—Dated October 19, 1880. 2d.

This consists in the method of separating and utilising phosphoric acid from phosphate of alumina by heating the latter in contact with metallic tin, such as tinplate cuttings.

4068. Dyeing Leather Black, N. G. Sørensen.—Dated October 7, 1880. 4d.

This consists in the method of imparting by the use of vanadic compounds or preparations, a black colour to leather, containing tannic acid, or gallic acid, or derivations or combinations thereof.

4069. Preserving Animal and Vegetable Substances, J. W. M. Miller.—Dated October 7, 1880.—(Not proceeded with.) 2d.

The preparation consists of the following ingredients:—Diatase, glycerine, glucose, crystals of pure chloride of sodium, nitrate of potash, common salt, salicylic acid, salicylate soda, acetic acid, sea water, distilled water or pure water, honey and grape sugar, any two or more of which are mixed together with or without the aid of heat.

4072. COMPOSITIONS FOR PRESERVING BACON, &c., J. P. Geary.—Dated October 7, 1880. 4d.

One solution is composed of salicylic acid 12 drachms, benzoic acid 4 drachms, borax 1 lb., nitrate of potash $\frac{1}{2}$ lb., corrosive sublimate 40 grains, water 9 quarts. Two solutions are described, which are modifications of the above.

4874. Decorating Celluloid OR ANALOGOUS SUBSTANCES, A. J. Boritt.—Dated November 24, 1880.—(A communication from N. Hart and R. A. Bacon.) 4d.

To enable designs or letters in tints or colours to be permanently marked on celluloid, aniline colours are dissolved in carbolic acid, and ether or alcohol or both added thereto. The colours thus prepared are applied to the surface, and when dry will not rub off.

4823. Plaisters, A. H. Mason.—Dated November 22, 1880. 2d.

Leather scrap is pulped and passed under couch rollers to deprive it of moisture, and upon the sheets so formed fossiline mixed with medicinal matters required for the particular complaint is spread.

4638. Beverages, E. W. Allen.—Dated November 11, 1880. 2d.

This relates to an improved nitrogenous compound gaseous-flavoured beverage, consisting of 1 drachm lupuli, 30 minims dilute phosphoric acid, 25 minims dilute tartaric acid and cream of tartar, and 90 minims lime-juice syrup to 5 oz. of water.

4591. Flexible Ink OR COLOUR COMPOUNDS FOR PRINTING, L. B. Bryant.—Dated November 9, 1880. 2d.

This relates to compounds suitable for ink or colour pads for rubber type, &c., and consists of 4 parts aniline powder mixed in 12 parts water, to which is added 1 part glucose, 2 parts acetic acid, and 8 parts glue or gelatine, after which 12 parts water are added, and 64 parts glycerine.

4716. Autographic Printing, E. Edwards.—Dated November 16, 1880.—(A communication from C. Stener.) 2d.

The plate from which the impression is to be obtained is so prepared that it only receives the printing inks on the parts to which the writing has been transferred by means of a solution of acetic iron. For this purpose the printing-surface consists of 15 parts gelatine moistened in water, 5 parts glycerine, and 1 part water-glass, the whole prepared in a mould to form a sheet. The writing is made on paper with acetic iron, or acetate of iron, and then placed on the printing-surface.

4248. REPRODUCING COPIES OF WRITINGS, DRAWINGS, &c., O. Lelin.—Dated October 18, 1880. 6d.

Vegetable parchment, covered on both sides with a gelatinous composition, forms the printing-surface, which is mounted in a stretching frame, and used to reproduce writings, &c., with greasy or thick ink.

4784. Alimentary Material for Making a Beverage, J. McWilliam.—Dated November 19, 1880.—(A communication from W. Armstrong.) 2d.

Bran is saturated with syrup, and dried by a gentle heat, and when thoroughly dry is roasted to a full brown colour. A beverage is made by making an infusion of this substance.

Poisoning Cases.

CHEMIST POISONED.—On June 22 Mr. Alexander Morton, chemist, High Street, Felling, was found dead in a room over his shop. He had once been confined in an asylum, and had recently become lightheaded and despondent. Various poisons were found in the room, and the floor was stained by vomit. No *post-mortem* examination or analysis of the contents of the stomach was made, but the jury found that death had been caused by some irritant poison administered by himself, but whether taken by mistake or with the intention of committing suicide there was no evidence to show.

CARBOLIC ACID.—Patrick McLeary, stonemason, was found dead at Torebrook on June 28. He had bought carbohc acid at a druggist's on the previous day, and a cup which had contained the acid was found at his bedside.—At Newark the Sanitary Inspector, James Sheppard, committed suicide on June 27 by taking this acid.

CHLOROFORM.—At Houghton-le-Spring, near Durham, Thomas Bousfield (40), whitesmith, died on June 15 from the effects of a large dose of chloroform. During a violent paroxysm of coughing he seized a small bottle of cough medicine and emptied it at a draught. He died an hour and a half later.

LAUDANUM.—Nicholas Bywell (66), engineer, died at Haltwhistle on June 24. He had purchased a large quantity of laudanum, pretending that it was for external use, and was found insensible, with the bottle at his side.—Charles Redhead was found dead at Newcastle on June 11 under precisely similar circumstances.

LOTION.—A curious case occurred at Appleton-le-Moors about June 15. Mrs. Outburn was supplied by Dr. Muil of Kirbymoorside with a poisonous lotion for her eyes, and put it in a teapot for safety. She invited three friends to tea, and made the beverage in this particular pot. All four of them began to feel ill directly after taking the first cup, and the label "Poison" was found floating in the infusion.

MORPHIA.—On June 25 John Marks, of Leeds, traveller for a firm of wholesale druggists, committed suicide by taking a large dose of morphia. His mind had become unsettled by business matters.

OPIUM WINE.—AN ASSISTANT'S MISTAKE.—An inquest was held on June 17, at Birkenhead, on the body of Florence Howe, three months old, daughter of Edward Howe, butcher, Chester Street, Birkenhead. The child was taken ill on June 14, and next day a medical man, after visiting the infant, wrote out a prescription, which the mother took to a druggist's shop. Owing, it was said, to the prescription being written in a somewhat illegible manner, the druggist's assistant used in the medicine wine of opium instead of ipecacuanha wine. A dose of the mixture was given to the child, who afterwards slept till four o'clock on the following morning, when it was seized with convulsions, and death ensued. The jury returned a verdict that the deceased died from the poisonous effects of opium, inadvertently given by the druggist instead of ipecacuanha wine.

PRUSSIC ACID.—H. L. Swinson (21), medical student, committed suicide at Birmingham on June 21. He had been compelled to absent himself from an examination by inflammation of the eyes, and had also complained of pains in the head. On June 21 he obtained an ounce of prussic acid from Charles Thompson, chemist, Stratford Road, with whom his father had a wholesale account. Verdict, suicide during temporary insanity.—On June 13 an inquest was held at Stoke Newington as to the death of E. E. Swan (31), wife of a clergyman. Dr. A. Morrison had examined the body, and stated that death had been caused by poisoning with prussic acid. "Taylor on Poisons" and a small hand-bag containing several bottles of poison were found in deceased's trunk. Verdict, suicide while of unsound mind.

POTASSIUM CHLORATE.—A police constable has died at Belfast from the effects of a dose of potassium chlorate administered by mistake for a seidlitz powder.

Personalities.

MR. H. F. DRAPER succeeds to the business of his late father-in-law, Mr. Whavey, of Chippenham, Wilts.

THE business of Messrs. J. Hay & Son, 14 Bond Street, Leeds, established in 1821, has been sold to Mr. George Farrar, of Orsett, Yorkshire.

T. L. WILLIAMS, late of Owston Ferry, near Bawtry, has taken to the shop lately occupied by Mr. W. G. Williams, at Abergele, North Wales.

MR. D. T. WILKES, of Upton-on-Severn, has disposed of his business there, which he has carried on for 32 years, to Mr. John Gibbs.

THE business of Mr. Duckingfield, of Burmantofts Street, Leeds, has been purchased by Mr. Briggs, of Wakefield, through the agency of Mr. Brett, Leicester.

THE business of Mr. Scott, of Lansdowne Road, Sheffield, has been purchased by Mr. Newsholme, also of Sheffield, who will conduct it as a branch. Mr. Brett, of Leicester, valued for vendor, and Mr. Radley, of Southport, for buyer.

THE Society of Arts have awarded their Albert Medal this year to Dr. A. W. Hofmann, F.R.S., of Berlin.

DR. AQUILLA SMITH has resigned the King's Professorship of Materia Medica and Pharmacy in the School of Physic, University of Dublin.

THE "Mr. Thomas" whose purchases of pictures at Christie's have been reported as reaching prodigious amounts, is stated by the *Athenæum* to be Mr. Thomas Holloway, the proprietor of a well-known establishment in Oxford Street, and the benevolent founder of Holloway College, Mount Lee, Egham.

MR. O. V. MORGAN, one of the proprietors of this journal, is now travelling through the Australasian Colonies, and will be glad to receive communications referring to THE CHEMIST AND DRUGGIST at the following addresses:—From August 15 to September 15 care of Bank of New South Wales, Sydney; from September 15 to October 15 care of Bank of New South Wales, Brisbane.

DR. OSCAR OLDBERG, of New York, who is delegated to represent the Pharmaceutical Association of New York State at the Pharmaceutical Congress in London, favoured us with a call this week. Dr. Oldberg has also charge of the exhibit of coated pills of Messrs. Schieffelin & Co., of New York, at the International Medical and Sanitary Exhibition. The goods for this exhibit were unfortunately shipped by the *Britannic*, which went aground outside Liverpool last week. Messrs. Schieffelin's case was pitched overboard, and the solubility of their pill-coating material was as thoroughly tested by old Father Neptune as to destroy any one else's opportunity of making any experiments. Dr. Oldberg has, however, got another case in position and shows a few samples, and in the course of next week hopes to receive another stock sufficient to fill his case.

A BOTANIC LYRIC.—

WHAT reck I though she be fair
If the flowers are not her care;
If she ponder not upon
Many a Dicotyledon;
If she have no admiration
For all forms of æstivation.

Let her learn through happy hours
Properties of plants and flowers;
Know how Watercress should be
Rank'd with the *Cruciferae*;
How the Sundew, without question
Darwin tells us, has digestion.

If perchance her ardour burns
For the Cryptogamic ferns;
She will see how spores become
Cased in the *Indusium*;
And how wondrously you vary
Scolopendrium vulgare!

She shall calmly learn to state,
Clover is tri-foliate;
And describe in words exact,
Awn and axis, blade and bract:
So shall I in her sweet presence,
Find my love hath inflorescence.

—Punch.



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SEE SEABURY & JOHNSON'S Advertisement of INDIA-RUBBER POROUS AND SPREAD PLASTERS on page 133.

PAGE'S PATENT VAPORIZER, ETC. See page 134.

LLOYD'S UNIVERSAL FOOD.

The New Cooked Food for Infants, Children, and Adults, both in Health and Sickness. See page 118.

GLACIALINE { The Great Food Preservative.
 See page 77.

STEDMAN'S TEETHING POWDERS.

1/1½ size (containing 9 Powders)	8/6 per dozen	} less usual discount.
2/9 " " 27 " "	24/0 " "	
4/6 " " 54 " "	42/0 " "	
11/0 " " 216 " "	11/0 net.	

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ELLIMAN'S EMBROCATION. See page 128.

MAY & BAKER. { SPECIAL NOTICE,
 pages 2 and 55.

EDITORIAL NOTES.

THE PHARMACEUTICAL COUNCIL
 AND THE ROYAL COMMISSION.

We will proceed no further in this business.—Macbeth.

In introducing to the Pharmaceutical Council at their July meeting his picturesque scheme for the final adjustment of pharmaceutical and medical relations, Mr. Schacht expressed his opinion that a "supreme moment"—in the French sense—had arrived for British pharmacy. The poetic notion was perhaps more literally accurate than the speaker meant. As Waterloo was the supreme moment for Napoleon Bonaparte, as Sedan was the supreme moment for his nephew, as the instant of its disruption is the supreme moment for the

fragile bubble, so there is some reason to fear that July 6 was likewise an uncomfortably supreme moment for the schemes of pharmacy law amendment which the Council have so laboriously planned. We hope and believe that the mischief accomplished will be repaired, and we have mistaken the temper of the trade if that desire is not generally shared through the country; but the most loyal supporters of the Pharmaceutical Council can hardly survey with satisfaction that melancholy day's work.

The position is to be thus described. The Council's Pharmacy Acts Amendment Bill necessarily awaits a more convenient season before any progress can be made with it. A check has been met with in the refusal of the Government to undertake the task of piloting the Bill through Parliament; but to regard this check as a final overthrow is obviously a display of uncalled-for faint-heartedness. Simultaneously with the check, however, a promising opening has occurred in the appointment of a Royal Commission with the object of providing some scheme of medical legislation which shall generally satisfy the reasonable requirements of the profession and the public. A month or two ago it was imagined that an opportunity was thus presented of getting a fair hearing for pharmaceutical claims before an influential body with power to give effect to what they might think just and beneficial. It was indicative of what the Council then intended to submit to the Commission that they referred the preparation of their case to the Pharmacy Act Amendment Committee. Besides, they something like guaranteed Mr. Radley that the counter-practice rights of chemists should be explained, and subsequently they almost unanimously agreed to prefer a claim for pharmacists to have a share in the preparation of the Pharmacopœia. Application was next made to be granted a hearing, and there is not the least reason to anticipate that the application would be rejected. The secretary to the Commission merely asked to be furnished with the purport of the evidence it was intended to offer, and that natural request seems to have occasioned a condition of confusion and dissension. Unanimity was at an end, and the legislative abilities of the Council were superseded by flourishes of dialectic skill. Mr. Schacht, with the best intentions, introduced the disarray. His ideas, framed into a fanciful picture, won the applause of the Pharmaceutical Conference a few years ago, but the most cordial admirers of the picture were aghast when they found its author intent on practically realising his scheme. Whether we appreciate its logical beauty or not becomes a secondary question when it is seriously proposed to advocate its adoption by the Royal Commission. Their trusty and well-beloved Commissionerships, not to mention the medical authorities themselves, would scarcely understand and would hardly tolerate the audacity of a body not immediately concerned in their inquiry undertaking to arrange everything for them, and in such a manner that everybody else's sheaf should make obeisance to the pharmaceutical sheaf. Besides, the scheme would be worse than useless to pharmacy unless the concessions claimed were granted, and a law to compel the British public to get their advice from one man and their physic from another, whether they wished for such an arrangement or not, would not be granted by any Parliament likely to be elected in this or the coming generation. The lion may lie down with the lamb some day, but no Act of Parliament will induce him to do so.

Mr. Schacht's proposal seems to have startled the Committee and brought them and their labours to a standstill. Discussion thereof was referred to the Council, and the members almost unanimously rejected the scheme. But here their harmony ended. The ability to formulate any

material for the Royal Commission seemed entirely lost, and, for reasons which we venture to think wholly inadequate, the Council resolved to inform the secretary to the Commission that, on further consideration, they had resolved to withdraw their application to be heard, though, fortunately, the saving clause, "for the present," was added to the resolution at the last moment.

We fully agree with the majority that the Council could not reasonably go before the Royal Commission to advocate their claim to an authoritative share in the preparation of the British Pharmacopœia. We do not believe they could logically insist on that claim, and if they could the matter is too insignificant for the machinery which would have to be exercised in support of it. But we submit that there are other matters which it is of the first importance should be understood correctly by the Royal Commission. The position of chemists in regard to counter practice is assuredly one of such subjects. The recent Medical Bill was so worded that it could have been used at any moment to interfere most oppressively with the fairest conduct of a chemist's business. The exemption clause of the Apothecaries Act, too, which was relied on for so many years, has been declared by three or four judges to be useless as a protection against a sudden fit of jealousy on the part of the lower strata of the medical profession. The Royal Commission and their medical witnesses certainly will not ignore pharmacy altogether, and surely, in view of attacks actually made upon us, in view of possible misrepresentations, and in view of the actual condition of the law, common prudence suggests that we should make clear our position to the Royal Commission. It would be, for example, very desirable that the members should be made acquainted with the circumstances which led to the insertion of the exemption clause in the Apothecaries Act, as narrated in the "Progress of Pharmacy." Then, again, it is by no means unlikely that they would be willing to hear suggestions as to the sale of poisons, for the further protection of the public, and if they would it is not impossible that the desirable amendments of the Pharmacy Act might be obtained without a direct Bill emanating from the pharmaceutical body itself. All this was clearly perceived two months ago, both in the Pharmaceutical Council and outside. The sudden abandonment of all effort to secure the fair interests of pharmacy in any readjustment of medical legislation is disappointing to those who had been encouraged by the recent attitude of the Council. This disorganisation happens, unfortunately, just before the era of congresses and holidays, which will necessarily interfere with steady work, but we hope it will not finally prevent the proper representation of the pharmaceutical position before such an important body as this Royal Commission.

PHARMACISTS AND THE PHARMACOPŒIA.

THE reasonableness of the claim that pharmacists should share with medical men the duty of revising the national pharmacopœia must be obvious to everybody. Even to medical men there can be no necessity to reiterate arguments of such axiomatic character. The simple common sense of bringing together a board of representatives of both professions to discuss a subject on which the knowledge of the one class is the natural complement of that of the other has been recognised in every other country blessed with a pharmacopœia except Great Britain, and it will no doubt seem strange for some of our foreign visitors to have to realise the position of affairs in that respect in this country. *Les Chinois de l'Europe* will be the phrase which will

have to bridge over one more of our many insular peculiarities.

But though there can be but one opinion thus far as to the desirability of pharmacists and physicians working together, it does not quite follow that the former will be at all well-advised in going before the Royal Commission, as they have been urged to do, and *demanding* that a position on the Pharmacopœia revision committee should be accorded them as a right. The grievance, after all, is entirely a sentimental one, and even as such pinches the pride of only a select few. Then, too, the right is by no means so obvious as the reasonableness of the claim. The Pharmacopœia is an authoritative work, it is true, and those who undertake the preparation of physicians' prescriptions are compelled by law to obey its formulæ. It is for this reason that the right is claimed. But it is hardly conclusive. The Pharmacopœia is essentially a collection of formulæ provided for the convenience of physicians in writing prescriptions. They have a fair right to insist on some guarantee that those to whom they entrust the preparation of their prescriptions shall supply exactly what is ordered. And as it is they, and not we, who have to do the prescribing, we cannot see any shade of reason in suggesting that they should be compelled against their will to give to pharmacists any controlling power in the selection of the remedies which they will include in their handbooks. They already recognise the necessity of availing themselves of pharmaceutical skill by employing certain experts to aid them. By so doing, the Medical Council might reply to the pharmacists' claim, they do what is necessary to ensure the practical possibility of their formulæ, and that all beyond that is their own business. If they were very wise or moderately courteous, they would assuredly invite pharmaceutical co-operation. To attempt to force such a concession from them, it seems to us, would be simply to expose ourselves to a humiliating rebuff.

INTERNATIONAL PHARMACEUTICAL CONGRESS, 1881.

THE following is the programme, as far as it has been at present arranged by the committee appointed to organise it:—

Monday, August 1, 11 A.M. to 4 P.M., with adjournment of one hour for luncheon at one o'clock.—Address of welcome by the President of Pharmaceutical Society of Great Britain. Election of President, Vice-Presidents, and Secretaries of Congress. Reading and discussion of papers. The executive committee will make arrangements to take the guests for an excursion down the river Thames.

Tuesday, August 2, 11 A.M. to 1 P.M.—Reading and discussion of papers. *2 P.M. to 4 P.M.*—Presentation of the Hanbury gold medal to Professor Flückiger, who is expected to be present. Reading and discussion of papers. Banquet at Willis's Rooms at 6.30 for 7 P.M.

Wednesday, August 3, 11 A.M. to 1 P.M.—Reading and discussion of papers. *2 P.M.*—Concluding business of Congress. Address from President of Congress. The arrangements for the evening of Wednesday are not yet complete.

Thursday, August 4.—An excursion from Henley to Maidenhead by water, including, it is hoped, a visit to Cliveden.

Applications for tickets for the excursion must be made immediately, as the number of tickets is limited.

The subjects to be discussed are expected to come under the following divisions, namely:—1. Equalisation of the

Strength of Official Pharmaceutical Preparations containing Potent Drugs. 2. Pharmaceutical Education. 3. Pharmacopœia Revision.

INTERNATIONAL PHARMACEUTICAL CONGRESSES.

THE first suggestion of the series of international pharmaceutical congresses now about to culminate in London seems to have emanated from a united gathering of the North and South German "Apotheker-Vereins" at Wiesbaden in September, 1864. After that meeting an invitation was published to the pharmaceutical societies of the world to meet at Dresden "to discuss ways and means to set limits to the secret medicine trouble, or to upset it altogether" (um Mittel und Wege in Erwägung zu ziehen, wie dem Geheimnisswesen Grenzen zu setzen oder es gänzlich zu beseitigen sei). The circular said the trade made the proper execution of necessary medical legislation impossible, injured the health of the public, and drew considerable amounts of money from all lands. No other question for discussion was suggested, and no date for the meeting was proposed. The names of Dr. Riecker, president of the South German Apotheker Verein; Dr. Geiseler, for the North German Apotheker Verein; Dr. Björklund, for the Russian Pharmaceutical Society; and Dr. Klinger, as representative of the Austrian Apotheker Verein, were attached to the circular.

The Congress was actually held the next year, 1865, on September 12, but at Brunswick, instead of Dresden as at first suggested. The programme named 10 subjects for discussion, among which the great question of the previous year, the secret medicine trade, had dropped into the ninth place. The subjects proposed were:—The education of the pharmacist; the scarcity of assistants; an assistant's aid fund; position of pharmacy; free trade; unity of the formulæ of galenic preparations; the metric system of weights; pharmacopœia language; secret medicine trade; sale of poisons. The pharmaceutical societies of each country were to be entitled to send each three delegates, but only one vote was to be allowed per country. Twelve delegates from foreign countries appeared at the Congress—France, Russia, Finland, and Austria being represented. The ten subjects were all discussed, but nothing very definite seems to have resulted.

The second Congress was held at Paris during the period of the exhibition there in 1867. The subjects suggested for discussion were:—1. The constitution of pharmacy; how best can the pharmacist fulfil the duties which his profession require of him. 2. The means of producing a universal Codex of the most important medicaments. 3. The best methods for estimating the active principles in the most important drugs. Forty-two delegates attended this Congress, namely, four each from Prussia, South Germany, Austria, England, France, America, and Russia, three each from Italy and Spain, two from North Germany, and one each from Hungary, Switzerland, Belgium, Holland, Sweden, and Denmark. The results arrived at were the objection to free establishment of pharmacies, and the decision to adopt the Latin language for an international pharmacopœia.

The third Congress met at Vienna in 1869. Thirty-three delegates took part in it, of whom 22 were Austrian or German. This Congress voted the desirability of pharmaceutical schools and syndicates, and opposed the supremacy of the medical element in the official supervision of pharmacies.

War and its effects postponed the next meeting of the Congress till 1874, when St. Petersburg was the rendezvous. There 17 delegates represented 11 associations. This Con-

gress got as far as the following resolutions:—1. That it was desirable pharmaceutical professors at the Universities should be occupied with pharmaceutical teaching only. 2. That the revision of pharmacies should be conducted by one physician and one pharmacist associated. 3. That assistants ought to be held responsible for any errors they might make in the dispensary or the laboratory. In addition the delegates discussed the manuscript of the Universal Pharmacopœia, which had been submitted by the Parisian Committee, and listened to a paper from Professor Dragendorf, on the estimation of certain active drugs.

The interval of seven years which has now elapsed between the Congresses seems to indicate some decline of enthusiasm, though it is fair to remember that during the period it would have been difficult to find a year when a decent assortment of nations could be brought together with perfect assurance of peace. Hitherto the Congresses have not deeply engraved their accomplishments on the records of the profession, and probably general pharmacy cannot see that it is greatly indebted to the labours of delegates four times repeated. The London meeting will almost certainly be the largest yet held, and though it may not accomplish much more practical good than its predecessors, every British pharmacist will most ardently desire that the representatives of his occupation from foreign lands shall enjoy a really good time during their stay in this country, and shall leave well satisfied of our hearty goodwill towards our neighbours, even though these should be confirmed in their prejudices against our insular and unique methods of conducting pharmaceutical business.

POWDERED DRUGS.

A FIRM of pharmacists named Allaire, Woodward & Co., of Peoria, Illinois, U.S., who have hitherto done a special line of business in supplying "pressed herbs," have lately branched out into the drug-grinding industry, which they propose to conduct in an altogether superior manner. That intention would not be of such originality as to justify a particular notice of the firm's business if it were not associated with a scheme which they propound coincidently with the publication of their drug-grinding circular, and which, though they disclaim any advertising purposes thereby, is likely to have the unfortunate effect of directing particular attention to their new occupation. They want information concerning the powdered drugs now in general use in druggists' stores, and in order to get it they offer three prizes for essays on the subject. The prizes are to be Beck's microscopes; one at \$100, one at \$60, and one at \$40. The essays submitted must be limited in length to 10 pages of writing on foolscap paper, and must reach them before November 1, 1881. The competitor must choose one only of the following powders to work upon: Rhubarb, ipecacuanha, opium, cinchona, jalap, gamboge, socotrine aloes, ergot, or extract of liquorice. He must examine at least six samples taken from bulk, and not from any special guaranteed supply, and he is not to name manufacturers or source of supply. He is to examine the samples chemically, pharmaceutically, or microscopically, or by all three processes, and he is expected to show whether, and to what extent, the goods are below a perfect standard, either on account of adulteration or of inferior quality. We suppose by the fact of the circulars being sent to us essays from this country are invited.

The subject is one well worth investigation, and it will probably get as good attention in this manner as if a committee of a pharmaceutical congress, international or otherwise, were told off to inquire into it, with all the secretarial and presidential machinery which would be necessary.

Powdered drugs are probably now supplied in a state of absolute purity in this country. Our association, societies, conferences, royal charters, and Acts of Parliament have surely "elevated the standard" in that small respect. But there was a time when wholesale druggists had a tender affection for the trade in powders; when 100 lbs. of root ground up into 120 lbs. of powder; when cheap, worm-eaten, and nearly worthless goods lost all their defacements in the final chaos of the drug-mill, and came out actually enough as "pure drugs" at full rates. Those were the days when wholesale druggists made money, but now, according to information frequently supplied to us, that business is little better than a 5 per cent. investment for capital, with risks and anxieties added. The powdered drug trade still awaits its competent historian.

THE LAW ON MEDICAL ABUSE

A GERMAN correspondent sends us the following particulars of a case that was briefly mentioned in the *Times* German correspondence a few weeks ago:—On June 10 at the Amtsgericht (Chief Court of Justice) in Leipzig, Dr. Heinze, editor of the *Aertztlichen Vereinsblatt* (Journal of the Society of Physicians), there published, was sued for damages by 75 homœopathic medical men for publishing in his Journal, under the heading, "Charlatanism and Quack Medicine Swindle" (Kurfuscherei und Geheimmittel-Schwindler), a lecture delivered by Dr. Riegler before the Society of Physicians at Berlin, in which homœopathy and the homœopaths were very severely handled. The defendant tried to justify the statements in the lecture. Dr. Sonnenkalb, on behalf of the plaintiffs, maintained that the science of therapeutics was almost entirely dependent on experiment, and remarked that without supporting homœopathic extravagances it must be considered that the appellation of swindle and charlatanery to the adherents of homœopathy was offensive and libellous. Every physician, he said, daily prescribes for his patients indifferent substances, and the treatment of typhus, for example, differs considerably in the Vienna, Paris, and Berlin hospitals, yet no hospital professor would think of calling his colleague a charlatan. Homœopathic physicians must be allowed to judge for themselves at the bedside of their patients what treatment they should adopt. The large amount of favour which the public accorded them was not a point against them, and they claimed to be responsible to the public and to the authorities, but not to their opposing rivals, who themselves were only experimenters after all. The defendant desired to appeal to the opinion of the local medical college, but the Court refused to admit this, and sentenced Dr. Heinze to pay a fine of 100 marks (5*l.*) and costs, and to publish the verdict.

On June 16, at Berlin, a case arising out of the same circumstances came before the Court of Appeal, when the condemnation of Dr. Riegler, for invectives uttered against homœopathy, by the Superior Court was confirmed, and Dr. Börner, the editor of the *Deutsche Med. Wochenschrift*, in which Riegler's calumnious speech had appeared, and who had been acquitted by the Court below, was also condemned to fine and costs.

BOGUS DIPLOMAS.

THE notorious Buchanan, whose career as diploma-manufacturer in Philadelphia was brought to an end by the amateur efforts of the staff of the *Philadelphia Record* last year, has now, according to that journal, made a clean breast of his dishonourable but not uninteresting history. The dean's statements will need abundant documentary evidence before they can be accepted, and it is possible that, now that he

has no further chance of profit in that direction, he may be not unwilling to magnify his past exploits. According to his own account, he has been the means of distributing nearly or quite as many diplomas in the last 30 years as all the medical schools of America combined. The *Record* says:—"He gives the names of wholesale druggists in Philadelphia who have sold his diplomas, and he gives the names of the parties to whom the diplomas were issued. He relates how diplomas were signed by the faculty; how in one instance three professors, for \$5 each, signed 500 diplomas for him, and how, for \$3.50, the diplomas which were to go abroad were certified to by a Spanish Consul. In all, about 10,000 names are tangled up in his disclosures. He has given the names of many professional abortionists, and the means whereby they destroy life. He tells of the tricks of his trade, the quack nostrums that are advertised to cure all diseases, and of the impostors who prey on public credulity. He tells of faith in the supernatural; of a fortune-teller in Philadelphia who reads destiny under the light of candles made of human fat. He relates how one doctor goes to Europe annually and brings back love-powders which he represents were compounded at the shrine of Cupid in Minerva's Temple. He recites incidents wherein he robbed graves, and how on one Saturday morning he stole five dead bodies from Blockley Almshouse. He tells how he kept himself clear of the Courts and their penalties. He tells of 25 concerns in this country and Europe by which degrees are sold. He figures that fully 20,000 bogus diplomas are current in America, and 40,000 more in Europe. He gives the authorities a lever by which they can uproot every diploma-dealer in America." Besides "owning" three chartered universities, he supplied diplomas to a number of semi-educational bodies who recommended their alumni to him. But he does not see how or wherein his crime was greater than that of the German universities, which, as he says, openly sold degrees until a few years ago, or the University of Edinburgh, which, he states—though, we suppose, erroneously—advertised in 1845 that it would sell 1,000 diplomas at 10s. each.

FAILURES.

MR. RICHARD SEYD'S statistics of failures for the first half of 1881 indicate, on the whole, satisfactory results. The following details, extracted from his report, may be interesting:—The total number of failures in the six months was 6,270, which compares with 6,662 in the first half of 1880, with 8,990 in the corresponding period of 1879, and with 7,516 in that of 1878. These 6,270 are classified as 690 in the wholesale and 5,580 in the retail trades. To the total Ireland contributed 115 (9 wholesale); Scotland, 214 (49 wholesale); and England, 5,941 (632 wholesale). Wholesale chemists, druggists, &c., number 10 failures in the six months. In all 1880 they reached 18. Retail chemists and druggists figure for 32 in these six months, against 95 in 1880 (the whole year). Surgeons, physicians, and dentists between them reach 36 in the half-year, against 70 in 1880. As we have before pointed out, the failures of chemists and druggists may be reckoned to keep fairly within 1 per cent. per annum of their whole number, a proportion which can hardly be reckoned as very extravagant. Grocers, for the half-year, record 677 failures; drapers, 205; farmers, 482. The total numbers of those traders, and the limits of the definitions, are not accessible, but it would certainly seem that the proportion of failures in their cases was greater than among druggists. It would be interesting to complete the picture by getting statistics to show the proportion in each of those who retire with a fortune made out of the said business.

POISONOUS PATENT MEDICINES

MR. HENRY W. HUBBARD, L.R.C.P., last year directed public attention to the facility with which poisons, in the form of patent medicines, were procurable at numbers of drug, grocery, drapery, and so-called co-operative stores. He sent forth his little girl, under 12 years of age, round the neighbourhood of Notting Hill, and in a little while she came back with a collection of poisons supplied "without hesitation or inquiry of any kind," sufficient to convert any parish in London into a city of the dead. At that time Mr. Hubbard seems to have implied especial censure on chemists and druggists for the existence of a condition of things which they, more than any other class, are anxious to remedy. We ventured to put this to him at the time (April, 1880, page 139), and he seems to have benefited by our remarks, for in an article published in the July number of a new magazine called *Our Times*, he reviews the subject at length, and in a tone which may satisfy the most ardent advocate of chemists' rights. It is still to be regretted, however, that Mr. Hubbard should not have further followed our suggestions, and before sending off his article to the magazine in which it is published, made one or two inquiries of persons officially cognisant of pharmaceutical doings. He would have then learned that essentially what he advocates is embodied in a new Bill, on the main points of which all sections of the trade are agreed, and which only awaits less troublesome times for introduction into Parliament. But Mr. Hubbard's contribution to the formation of a public opinion which shall ultimately ensure the success of the amended Pharmacy Bill should be welcome to all who wish to promote the safety of the public on the one hand, or the interest of pharmacy on the other. First he quotes reports of several instances of death resulting from overdoses of patent medicines. Next he repeats the story of his little girl's travels in search of poisonous patent medicines, showing how easily they may be obtained, and then he summarises the Pharmacy Act of 1868, incidentally alluding to the House of Lords' decision that the word "person" used in the Act did not apply to a corporation, so that, says the writer, "it would appear that any corporation aggregate may sell groceries and drugs, pickles and poisons, provided that one of their servants is a duly-qualified druggist." After quoting the exemption of patent medicines from the first 15 sections of the Act, Mr. Hubbard concludes his exposition of the Act with the syllogism that "The Pharmacy Act was enacted to restrict the sale of poisons; the Pharmacy Act exempts patent medicines; patent medicines largely contain poisons, therefore the Pharmacy Act stultifies itself."

Mr. Hubbard quotes some statistics to show the rapid recent increase in the consumption of patent medicines. In 1800 the stamp duty brought in the sum of 14,036s.; in 1870 the duty collected was 69,204s.; in 1880 the duty collected reached 136,336s., so that the first 70 years of the century showed an increase of 55,168s., while the past 10 years marked an increase of 66,130s. The reduction of the charge for the patent medicine licence, Mr. Hubbard reckons, has had two bad effects: first, it reduced the revenue from 7,554s. (in 1875) to 4,779s. (in 1880); and, secondly, it transferred to a great extent the sale of these mysterious patent drugs "from their proper repositories—the chemists' shops—to grocers and co-operative stores, &c." where they "have so become the associates of tea and sugar, pickles and plums, to be distributed broadcast by tradesmen who are utterly ignorant of the dangerous nature of the articles they are dealing in." As to the number of these ignorant dealers, it is found that in 1879, 19,008 licences were granted for Great Britain. Mr. Hubbard, assuming that all

the 13,551 then registered chemists and druggists took out licences, reckons the number of other persons manufacturing or vending patent medicines at 5,453. But this balance of "other persons" is really much greater, because of the 13,551 registered chemists and druggists it may be estimated that something like 4,000 were partners, assistants, or not in business, thus leaving the trade as shown by the licences, about equally divided between druggists and "other persons."

What should be done in the public interest to check the dangers incident on this large and untrammelled trade in dangerous medicines? Mr. Hubbard recognises that some of these medicines are safe, useful, and much appreciated. His instances are curiously chosen. They are Cockle's pills, Creefidd's algonicon balm, and Steedman's soothing powders. One of these three has at least been on the suspected list, and Creefidd's production and Creefidd himself seem to have been thrust into this connection with advertisement objects. But, however that may be, it is clear that the trade is not, on the whole, so useless, as well as dangerous, as to call for autocratic repressive measures. Mr. Hubbard's cogitations seem to have brought him, as we said, to much the same conclusions as those arrived at from a different starting-point by the framers of the Amended Pharmacy Bill. He writes as follows:—

The labels should bear some impressive caution by the word "Poisonous." The proper technical name of the chief ingredient and the full limit, if known, of a safe dose should be stated.

The licence for the sale of the same should be granted only to qualified pharmacists, and subject to the conditions of sec. 27 of the Pharmacy Act.

If the large and various interests involved in the manufacture and sale of patent medicines be such that disclosure of the ingredients and registration in some public laboratory properly constituted for the purpose is not, as in other countries, expedient here, surely those who make use of these preparations should be made more acquainted with the nature and properties of the articles they are taking.

In all instances of death occurring as a consequence of a medicine, for which a secret art is claimed in its manufacture, and which is prepared by only one person, and advertised as a certain cure for complaints, whether curable or well known to be surely mortal, analysis of such agent should be required and extended deliberation exercised before that soothing, familiar, and final verdict of "Mi-adventure" is recorded.

If Mr. Thomas Watkin, oil and colour dealer, of Deptford, who was prosecuted by the Trade Association last month for selling a packet of vermin-killer, has followed the magistrate's advice and perused the Pharmacy Act, he is probably still puzzled as to how far he may carry on his business unmolested under the statute. If he sell Scheele's green or orpiment in the form of paint he is liable to prosecution unless he label them with their names, with his name and address, and with the word "poison," and enter every sale in a book kept for the purpose, with the signature of the purchaser and the attestation of a witness. That is what Mr. Watkin will have discovered from the study of the Act which he paid 5s. and costs to be introduced to at the Greenwich Police Court on July 16. A dealer in arsenical paper-hangings might study the Pharmacy Act with a similar conclusion as to his own goods. And the Pharmaceutical Society can, whenever they like, on the terms of the Pharmacy Act, bring the trade in arsenical paints and arsenical wall-papers entirely into the hands of the registered chemists and druggists.

* *

Towns or cities of only moderate financial means will do well to count the cost before they invite the British Association for the Advancement of Science to honour their localities with a visit. According to the local papers, the week's glory at Swansea last year cost about 2,600*l*. Towards this a guarantee fund of 1,700*l*. had been promised, 1,500*l*. of which have been paid up. The last 200*l*. is hard to get. But even should it be forthcoming, there will then remain 900*l*. totally unprovided for. It is stated in some quarters that the Reception Committee and the honorary secretaries are personally legally liable, but the Reception

Committee say the Association were the guests of the Corporation, who invited them. The Corporation have no funds on which they can draw for such an expense, nor can they legally raise the money by rates. It is proposed to get out of the difficulty by voting the 900*l*. as Mayor's salary, but it is questionable whether that roundabout course will be agreeable to those ratepayers who got neither honour nor ha'pence out of the visit. Swansea thinks that next time a scientific treat is wanted it will be more economical to ask the Zoological Society to come down in a modern Noah's ark well packed with specimens.

* *

A GENTLEMAN desires OCCUPATION anywhere with modern and noble thinking men, who aim at promotion of human progress as much as at money. Aged forty. Slightly nervous (hyperaesthesia vasomotorii). Has been physician. Has given up. Cannot work hard. Cannot bear heavy sky. Understands languages, but not music, no calligraphy, no drawing.—Address NEGRO OTUM, Steel & Jones's Advertising Office, Spring Gardens, S.W.

The above is clipped from the advertising pages of the *Athenaeum*, and has also appeared in other journals. The modern and noble thinking men who constitute the Pharmaceutical Council and aim at promotion of human progress as much as at money should not miss the services of this tenderly-constituted beauty.

* *

As an indication of the popularity attained by this journal among chemists and druggists abroad, we may mention that during the past month we have received the following additions to our foreign subscription list, viz.:—Twenty-eight from the various Australasian Colonies, 11 from the United States, two from India, two from China, two from France, and one each from Jamaica, Mauritius, New Brunswick, Italy, Switzerland, and the Sandwich Islands. It is hardly necessary to point out that this is the time of the year least prolific in the receipt of subscriptions.

* *

The medals and diplomas awarded to the successful exhibitors at the Sydney Exhibition have just been distributed in London. We have been shown those sent to Messrs. Lynch & Co. The diploma is perhaps about the handsomest production of the kind sent out from any exhibition. It is the production of a New York firm, and represents in the margin the typical industries and sources of wealth of the world, while Fame appears on a globe crowning with wreaths the successful aspirants after her honours. The globe shown rather literally upsets European notions of geography, as it gives the place of honour towards the top, which our geographers generally reserve for Great Britain, to New South Wales, the mother country being lost in antipodean darkness. *Absit omen!* The legend on the medal runs, *Ortu Regens quam pura nites*.

* *

Pity Mr. R. S. Hudson, of West Bromwich, chemist and druggist and washing-crystal manufacturer, was not present at the annual meeting of the Chemists' Trade Association, when it was proposed to establish a guarantee fund to the extent of 5,000*l*. A proposition of a jubilee fund for just that amount was made a month later at a meeting of some eminent Congregationalists, when Mr. Hudson promptly objected to any such trumpery amount, enforcing his argument by contributing there and then 20,000*l*. If Congregational pulpits do not ring with the text that "Cleanliness is next to godliness," the gratitude of the body will hardly reach the level of its luck.

* *

The "Elevated Railway" of New York has unexpectedly developed the value of the superficial area of the chimneys of the neighbourhood through which it passes. We read that the roofs and chimneys along the route are rapidly being appropriated by the patent medicine proprietors, and are blossoming into beauty under the skilful hands of their billstickers. In some instances a rather too smart trick has been played in order to secure available positions. A man calls at the house, saying he is sent by the landlord to inspect the roof. The tenant, as a rule, gladly shows him the way up, and as a rule does not accompany him. Safe there the invader proceeds to take advantage of the most prominent sites for his placards, and having decorated the top of the house therewith takes his leave of the unsuspect-

ing householder in the workmanlike style in which he introduced himself.

* *

A tender-hearted American quack thus mourns the sad fate of the generations who lived and died before his cough mixture was planned:—"When I look at that vast field, filled with the pale nations of the dead, and the bending stones covered with moss, I shed a tear and say: Ignorance ushered thousands there. They sleep under the solemn pines, the sad hemlocks, the tearful willows, and the embracing vines. They sleep beneath the shadows of the clouds, careless alike of sunshine or of storm, each in the windowless palace. I have one sentiment for catarrhal people living and dead. Cheers for the living; tears for the dead."

* *

This is how one of the wits of Petrolia treats a serious matter—

Mary had a little lamp
Filled full of kerosene;
One day she tried to blow it out
And hasn't since benzine.

And this is how Henry Ward Beecher in a recent sermon referred to the Standard Oil Company, whose history we narrated in our March number:—"That company is as imperious as all the Egyptian pyramids piled one upon the other, and with Pharaoh on top of all. It is the most gigantic monopoly on the earth, and it is not the less cruel and dangerous because one of the leading men in it is a prominent member of a Baptist church in Brooklyn."

* *

The *Druggists' Circular* localises the following incident at Detroit:—A lady called at a drug store the other day and said: "I want a tooth-brush—a real nice one. I want it for a spare bed-room."



AND

Literary Notes.

The Young Doctor's Future; or, What shall be my Practice? Being Some Account of Medical Appointments: Civil, Naval, and Military; with Hints upon the Method of General Practice. By E. Diver, M.D. London: Smith, Elder & Co. 1881. Pp. 100.

This title is a good description of the book. All available details seem to have been collected, and the result is sure to be useful to the class for which it is intended.

Department of Agriculture. (United States Government.) Special Report No. 33. Report of Analytical and other work done on Sorghum and Cornstalks by the Chemical Division of the Department, July to December, 1880. By Peter Collier, Chemist. Washington Government Printing Office, 1881.

This report, like most of the publications of the United States Government, is "got up quite regardless of expense." There are 13 beautiful plates of varieties of sorghum and 14 plates thrice the size of the page showing graphically the economic characteristics of these varieties. There are 101 pages of letterpress, and more than 70 of these are filled with the most expensive form of printing, namely, tables of figures recording analytical results; and these records are the result of "3,601 analyses of 38 varieties of sorghum, 11 varieties of cornstalks, and a few outside samples of sugar and syrup."

We are not told that the sorghum is extensively cultivated in the United States, or that vast quantities of its stalks await utilisation. Indeed, the writer of the report defends the work from the charge of uselessness by comparing it with the history of the beet-sugar industry in Europe. The aim of the undertaking seems to have been to determine the variety of sorghum which produced most sugar, the time at

which it produced most juice, and at which its juice contained most sugar. As subsidiary aims, we are here told what soil suits it best, what influence manuring has on its yield of sugar, what is the value of the waste products left after the separation of the sugar, how much sugar an acre should yield, what precautions should be observed in making the sugar. In fact, the farmer who is thinking of entering this business will find in this pamphlet all the scientific material necessary to guide him. The material, too, is not founded on theory and built up of guesses, but consists throughout of observed facts. Doubtless, further investigations will alter the perspective of some of these observations, making some more, and others less, prominent. But, so far as the work has gone, it is thoroughly reliable.

Even if this report leads, not to the introduction of a new industry equalling in magnitude the beet-sugar trade of Europe, but, which seems less likely, only warns capitalists off a dangerous and unprofitable field, it will still have been a wise expenditure of the great wealth which the United States Government has but to reach out its hand and glean from the natural resources of its wonderful territory.

Inorganic Chemistry, adapted for Students in the Elementary Classes of the Science and Art Department. By Dr. W. B. Kemshead, F.R.A.S., F.G.S., &c. Enlarged edition, revised and extended. London and Glasgow: William Collins, Sons & Co. (Limited).

This book is one of Collins' elementary series. It has grown out of a smaller work, which, the author states in his preface, has had a very favourable reception. The obvious intention of this book is to enable the student to "make up" chemistry for examination purposes. If in doing so the student should be so fortunate as to develop his mental faculties, and to add to the stock of knowledge that will be useful to him in the struggle for existence, he will have done considerably more than might reasonably have been expected of him. There are many careers that can only be entered upon by passing examinations, and to do this with the smallest possible amount of labour is the one idea of the average student. It follows, of course, that labour-saving books will be sought after, and where the demand exists the supply is sure to follow.

In describing matter the author gives as an instance of one of its forms "the bodies we dwell in." It is not very clear what the "we" means. Forces are classified as "physical or natural and chemical forces." The force which is exerted in the oxidation of carbon in the process of animal respiration and in the assimilation of carbon by plants is surely as much a natural force as that which we employ in transmitting a telegraphic message along a wire. The definition is not calculated to assist the student in forming a clear conception of the distinctive peculiarities of the different forces. On page 19 the author states:—"The most striking and characteristic feature of chemical attraction is the entire change of properties with which it is attended—a change that by no possible reasoning could have been predicted." If reasoning by analogy is to be regarded as possible in this case, the statement is quite erroneous. In many cases it is quite possible by this means to predict the properties of compounds, and even of elements, before they are discovered. In the account of the non-metallic elements and their compounds, to which the work is chiefly devoted, the author has succeeded in condensing a great deal of information. The use of the thick-type formulae has the disadvantage of limiting the work to the followers of that very small school of chemists who now adopt this system. Though the book is entitled "Inorganic Chemistry," it does not include the chemistry of the metals, and is, therefore, unsuited for the purposes of the pharmaceutical student.

Watt's Dictionary of Chemistry. Longmans & Co.

The second part of the eighth volume, completing the third supplement, has just been published. It contains the letters G to Z, fills 1,334 pages, and brings the record of chemical science down to the year 1878, while it includes the most important discoveries of 1879 and 1880. In glancing through the book Mr. R. Warington's article on "Nitrification" attracted our attention. He traces in a very interesting manner the history of the discovery of the fact that the

production of nitre is due to a living organised ferment present in almost every specimen of vegetable soil. The conditions necessary for the formation of nitre are absence of light, presence of a salt of ammonia, of a salifiable base, and various organic and mineral compounds. It may fairly be said that chemists could not now exist without Watt's dictionary. Those who do not own a copy of their own depend on libraries for access to it.

Chemical Vade Mecum for Medical Students. By George Jones, F.C.S. London: Henry Kimpton, High Holborn. 1881.

THIS little book, of 87 pages, treats of chemistry, organic and inorganic. It is intended as "a refresher to the memory upon the more important facts in chemical science." The atomic weights of the elements are called equivalents. The author's atomicity is not very consistent, for we find phosphorus classed as a triad, and phosphoric acid described as consisting of "three molecules of water, in which three atoms of hydrogen are displaced by the triatomic radical PO." The student will find here some material for reflection. The author is careful to state whether certain bodies are supporters or non-supporters of combustion, but chlorine is not assigned either of these qualities, though it possesses both towards hydrogen. In a footnote referring to water-boiling we find:—"By tension of its vapour is meant its power to rise into vapour." The student will not derive any material benefit from having his memory refreshed by information such as this.

MR. DAVID EDGAR FLINN, Medical Officer of Health, Brownhills (Walsall) Urban Sanitary Authority, has published a paper read by him at a meeting of the Midland Medical Society, Birmingham, on "Unqualified Medical Practitioners in the Midlands." According to his statements the Midland district must be a veritable paradise for unqualified men to establish themselves in medical practice. He says there are six unqualified men within six miles of his own residence in independent practices, calling themselves "surgeons," generally recognised by the public, and, what is particularly curious, encouraged by the qualified practitioners "in order to indirectly oppose and annoy their qualified neighbours." One of the six unqualified gentlemen referred to is principal, with a qualified medical man as his assistant. If we had seen qualified practitioners encouraging and cherishing their unqualified rivals we should have thought they were carrying generosity to an unnecessary extent; but one of their own body who probably knows them best credits this apparent excessive virtue to motives of spite and jealousy which we had not previously fathomed.

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

BLAUD'S PILLS.

By William Gilmour, Edinburgh.

It is somewhat curious to trace back for the last 30 or 40 years the history of the iron preparations and notice how medical opinion or fashion has gravitated from one to the other of the various forms in which they are administered. In fact, the words written by Sir Robert Christison nearly 40 years ago might have been penned but yesterday, they are so applicable to the present condition of matters. "Much discrepancy of opinion prevails as to the most efficacious form for administering iron as a remedy, and a great variety of preparations of this metal are in consequence to be found in European pharmacopœias. It is much to be desired that accurate inquiries were made as to their respective qualities. That the official preparations are unnecessarily numerous no one can doubt who looks to the extreme simplicity of the action of chalybeate remedies. A considerable difference will probably be found to exist between those where the iron

is in the form of protoxide and those in which it is present as a sesquioxide; and the former are generally and perhaps correctly considered the most active." The very points which have not as yet been determined, while in the interval the non-official preparations of both oxides have increased almost without number. The question is essentially a medical one, and for medical experiment, but none the less is it the case that the pharmacist has also his part to perform in determining the best form and the keeping properties of the more delicate and changeable of these preparations. It is with very much of this feeling that I follow up the paper which appeared in last month's issue on protochloride of iron, with a few remarks upon another of the proto preparations of iron—a preparation, I may remark, which, after an interval of nearly 40 years, has again in many quarters become popular.

Blaud's pills are generally admitted to be an admirable form for administering ferrous carbonate, and certainly, under conditions which will immediately be referred to, they have very much to commend them. I have, however, examined samples containing 5 per cent. of oxidation and others containing 50 per cent. I have examined samples newly prepared in which the oxidation did not amount to 5 per cent., and I have examined the same samples after a few weeks' interval and found it increased to 15, 20, and even 30 per cent.; and a remedy which admits of such a variation in strength admits also of improvement, or else runs great risk of being altogether discredited. There is, moreover, another point which necessarily involves a variation in the ferrous strength of the pills nearly as great as that produced by any possible oxidation, namely, a difference in the formula by which they are prepared. I have made careful observation for many months back of all prescriptions ordering these pills, and I find that medical men are pretty nearly equally divided as to ordering the sulphate of iron in the dried and in the crystallised state. I have not been able to make the same extensive observation as to the general custom of those chemists who keep the pills in stock, but from the few inquiries which I have made, as well as from the experiments which I have made on different samples I can pretty well guess that here also the same diversity exists. Now it should be kept in mind that in using the two different sulphates of iron for the same preparation there is a difference in the amount of iron taken by nearly two-fifths, and this, it need scarcely be pointed out, is productive of as great a variation in the ferrous strength as the oxidation referred to. Nor is this all the evil, for I think I am safe in assuming that whichever of the sulphates is used the proportion of carbonate of potash taken to effect decomposition is always the same, namely, equal proportions by weight. In the case of the crystallised sulphate of iron a simple calculation will show that this is theoretically an excess of carbonate of potash by four-ninths, or in round numbers 45 per cent. In itself a slight excess of carbonate is probably the reverse of objectionable, but an excess to this extent, owing to the hygroscopic nature of the salt, and the effect of the moisture in oxidising and other ways spoiling the pills, is decidedly objectionable. Moreover, as everyone knows who has made the pills, in mixing the two salts their decomposition is accompanied with the development of moisture which in the case of the crystallised sulphate is sometimes so great as to delay the making of the pills until the mass has set, and so proves a fruitful source of oxidation. In the *Journal de Pharmacie*, March, 1841, there are two processes given for the making of these pills. (The article is transcribed in the second issue of the *Pharmaceutical Journal*, 1842.) In the one process the two salts are taken weight for weight and rendered quite liquid by the addition of boiled honey, and the mass afterwards evaporated over a moderate fire until of a proper pilular consistence. In the other process, which was intended to obviate the risk thus run in liquefying and drying the mass, the two salts are also taken weight for weight, but the sulphate of iron is dried previous to mixing at a temperature of 30° to 40° C., until it loses about 20 per cent. of its water of crystallisation, and to the sulphate of iron thus dried, and the carbonate of potash, is added about one-third by weight of honey, or as much as is requisite to make a mass rather soft at first. The author adds that "the desiccation of the sulphate does not impede its decomposition by the alkaline carbonate, for this decomposition would be equally effected if the sulphate had

been dried at a temperature of 100° C., and thus reduced to less than two-thirds of its weight." This is entirely my opinion. Decomposition will take place although the dried sulphate of iron be taken, and I have consequently always taken it (unless where otherways ordered) weight for weight with the carbonate of potass, added about 30 grains tragacanth powder to a mass sufficient to make one gross pills, and finally added glycerine sufficient to make the mass rather soft at first. It is difficult to give the exact proportion of glycerine required, as I have found it varies, probably owing to a combination of circumstances, but for the above quantity 1 drachm at least will be required. There is no property possessed by the honey which is not equally possessed by the glycerine, while it has the advantage of not increasing to any extent the bulk of the mass. With ordinary care by this process the oxidation, after making and drying the pills, should not exceed 5 per cent., and if they are properly stored it will proceed but slowly.

In the foregoing proportions of weight for weight it is only necessary to point out further that if the carbonate of potass contain 16 per cent. water of crystallisation it will still be in excess of the theoretical quantity necessary to effect decomposition of the dried sulphate of iron by fully 5 per cent., and unless the carbonate of potass has some undiscovered therapeutical effect this should be sufficient.

It may be interesting to point out the iron percentage of Blaud's pills as compared with some other ferrous preparations. Dried sulphate of iron, for example, when decomposed by the alkaline carbonate in the foregoing proportions, and allowing that there is no oxidation, yields 14.93 per cent. iron in the ferrous state, while the pills contain as near as possible 3 grains carbonate in 10 grains of mass. Saccharine carbonate of iron (allowing that it contains 37 per cent.) yields 17.89 per cent. iron, and in 10 grains of the pill mass there is also as near as possible 3 grains. Anhydrous iodide of iron yields 18.09 per cent. iron, while the pill mass contains in each 10 grains $2\frac{1}{2}$ grains nearly. Anhydrous chloride of iron, as given in last month's issue, yields 44.09 per cent. iron, while the pills contain as near as possible 4 grains in each 10 grains of the mass.

TRANSFORMATION OF MORPHIA INTO CODEIA.

MR. GRIMEAUX (*Comptes Rendus*) has proved the possibility of this conversion. His theory is that morphia ($C_{17}H_{19}NO_3$) is analogous to the phenols, and that codeia ($C_{15}H_{21}NO_3$) would be the methylic ether of morphia regarded as phenol. He, therefore, dissolved one molecule of morphia in alcohol, containing in solution one molecule of soda, and added one molecule of iodide of methyl. The codeia resulting from the reaction when purified presents all the characters of codeia obtained direct from opium, in regard to chemical properties, crystalline form, and rotatory power.

PEPTONES.

THE use of peptones (digested food) in many cases of debility of the digestive organs is increasing. The usual method of preparation is to digest a kilogramme of lean beef deprived of fatty and fibrous matter, and finely minced, for twelve hours at a temperature of 50° C. in 10 litres of water, acidified with hydrochloric acid (4 grammes HCl per litre), with frequent agitation, adding about 10 grammes of pepsina porci, more or less, according to its activity. After the digestion the liquid is filtered, and should yield no precipitate to nitric acid. It is then exactly saturated by bicarbonate of soda, and either evaporated to dryness or to a syrupy consistence. The 1 kilogramme of beef should yield about 250 grammes of dry peptone, or the fluid should contain about 50 per cent. of peptone. Peptones thus prepared always contain a considerable proportion of chloride of sodium, and thus if taken in wine, syrups, or elixirs, impart a disagreeable salt taste. To obviate this, M. Petit (*Journ. de Pharm. et Ch.*) suggests the substitution of tartaric for hydrochloric acid, using 15 grammes of tartaric acid per litre of water. The digestion and filtration being completed as before, he divides the filtered liquid into two equal portions, and saturates one portion with bicarbonate of potash, and then mixes again the two portions. Cream of tartar is thus formed, and is partially precipitated at once. After another filtration the liquid is evaporated, in which

process nearly all the cream of tartar is separated out in a crystalline state. The small proportion remaining does not affect the taste of wines, &c. to which the peptone may be added. A peptone wine may be made by dissolving five parts of peptone in 95 parts of Malaga wine. A peptone syrup is prepared by dissolving five parts of peptone in 90 parts of simple syrup, and adding five parts of tincture of orange peel.

COD-LIVER OIL AND IRON.*

A COD-LIVER OIL containing a known and constant amount of iron has long been a desideratum among medical men, and, acting on the initiative of one of them, M. Stromeier, apothecary in Hannover, has given the matter his attention, and has at last attained the desired result. The author's method is as follows:—20 g. of powdered castile soap are placed in a porcelain dish, and dissolved therein in 800 g. of distilled water, to which are added at intervals (as long as a cloudiness is produced) 7.5 g. of liq. ferri sesquichlor. of 15 per cent. After pouring off the supernatant liquid, the tenacious reddish-brown precipitate is kneaded at intervals with a small fresh quantity of hot distilled water until the wash-water ceases to yield a cloudiness with silver nitrate. This iron soap is dried by frequently stirring it for several hours over a water bath. The dry product weighs 18 g.=1,125 g. of iron; 16 g. of the iron soap, which contain 1 g. of iron, are mixed with 84 g. of cod-liver oil, the whole being gently heated.

The cod-liver oil and iron compound thus prepared contains 1 per cent. of iron, it is perfectly clear, of a reddish-brown colour, and is faultless as to taste and smell.

The clutiation of the iron soap is tedious, and enhances the price of the preparation; but if this is not properly effected, the soap does not dissolve well in the cod-liver oil, and forms in it a deposit on standing.

PREPARATION OF SACCHARATED IRON.†

J. FÖRSTER, of Rostock, after alluding to the defects in the formulae as yet proposed or in vogue for preparing saccharated iron, proposes the following as being the simplest and cheapest:—1 kilogramme of solution of iron perchloride, of 15 per cent., is mixed in a spacious porcelain or stoneware vessel with $\frac{1}{2}$ kilo. of sugar previously dissolved in water, to which mixture 1 kilo. 200 g. of soda crystals, dissolved in double that quantity of water, are then added. The hydrated iron oxide hereby formed dissolves again upon stirring so long as an excess of iron chloride is present, until upon the addition of the remainder of the soda solution the mixture consolidates to a thick pulp. The whole is freed as completely as possible from carbonic acid by stirring, and $\frac{1}{2}$ kilo. of caustic soda lye of a specific gravity of 1.33 added. After stirring for some time a clear reddish brown liquid is formed; this is made up to 10 kilos. by adding distilled water, and the saccharated iron precipitated by passing a lively stream of carbonic acid through the mixture.

The best kind of developer for the carbonic acid, the author finds to consist of a wide-mouthed bottle with a long safety funnel and wash bottle, the materials for producing the gas being magnesite, pieces of marble or chalk, and common hydrochloric acid. The precipitation is best carried out in a tall cylinder, the end of the developing tube being bound round with a piece of calico so as to cause the gas to rise in small bubbles.

The precipitation is complete in five or ten minutes, whereupon the mixture is diluted to 15 kilos., and the whole placed upon a sack-filter covered with wet calico. After draining a night the precipitate is twice again stirred up with 15 kilos. of distilled water, and when this has drained off the precipitate is mixed with 1 kilo. 200 g. of powdered sugar, and the whole evaporated down in a porcelain or tin vessel under frequent stirring. When the mixture has attained the consistency of syrup the sugar dissolves the iron again; the mixture is then completely dried, either over a steam bath or in thin layers on glass plates in a drying-box. Thus dried, saccharated iron is an inelegant brown powder, and is spread out in thin layers on paper

* *Archiv der Pharmacie*, May, 1881.

† *Archiv. de Pharmacie*, May, 1881.

and exposed for some days to the action of the air, whereby its colour changes into a uniform light brown. The mass is then again dried, and according to the percentage of iron required in the preparation is mixed with more or less sugar.

The saccharated iron thus prepared has a clean, sweet taste, and mixed with water yields a light reddish-brown neutral solution.

BISMUTH SUBNITRATE.

C. SCHNEIDER, of Sprottau, induced by a paper printed in the *Journal für praktische Chemie* "On the Behaviour of Bismuth containing Arsenic towards Nitric Acid," has for more than a year given this matter his special attention, in connection with the preparation of bismuth subnitrate, and gives in the *Archiv der Pharmacie*, May, 1881, the following summary of the results of his researches in this direction:—

1. In working up metallic bismuth poor in arsenic it is advisable to add the bismuth to the nitric acid in successive portions, waiting for the portion previously added to be dissolved before adding a further quantity, while in the case of bismuth rich in arsenic the addition of the portions must be effected as quickly as possible, in order to secure the complete conversion of the arsenic into arsenic acid.

2. The proper proportions are 5 kilos. of nitric acid of exactly 1·2 sp. gr., and 1,200 g. of metallic bismuth.



PATENT TILLS.—LOFTS v. CALLARD, TWINE, AND CAMPION.

In the High Court of Justice, Chancery Division, before Mr. Justice Fry, on June 24, Mr. Montague Cookson, Q.C., and Mr. W. H. Eaden appeared for the plaintiff, Mr. Madle represented Messrs. K. & T. K. Collard. Mr. Campion, defendant, appeared in person, supported by defendant Mr. Twine. Messrs. Campion and Twine had manufactured, and Messrs. Callard had used tills which were alleged to be infringements of the plaintiffs' patent.

After hearing counsel and Mr. Campion at great length, his Lordship delivered judgment. The first question, he said, is whether or no the defendants have infringed the invention protected by the plaintiff's letters patent. It appears to me that the defendants have infringed that invention. The invention consists essentially, I think, of a scheme for making a record of the transaction between the shopman and the customer visible to the customer, and then the doing of these three things simultaneously; giving access to the till or drawer in which the money is placed; moving the record of the transaction from the place where it was made to a place where it becomes inaccessible to the shopman; and ringing the bell so that the strip of paper moved by this machine presents a continuous record either of the transaction or of the negligences of the shopman in not entering the transaction, and the sum total of the receipts entered upon that strip of paper ought to be represented by the money in the till.

Now it is obvious that that invention affords a very considerable protection from fraud, because it disables the shopman from making an entry which cannot be seen both by the customer and his fellow-employee, and it moves the record out of his power so soon as he has placed the money in the till. Further than that it gives notice to those around that the transaction has taken place.

The defendant's machine presents, in my judgment, in substance all these ingredients. It is a combination producing the same substantial result, and although that result is produced by some different mechanical means, I think the differences are non-essential, and consequently in my judgment the infringement has been made out.

I have heard the defendant, Mr. Campion, at very considerable length in his endeavour to show that the patent is not novel, and I have looked at the specifications which he has handed to me as being the most important ones to show that it is not novel. In my judgment none of those specifications are sufficient to show that the patent is not novel.

Regarding all those circumstances I have come to the conclusion that in this case it is my duty to grant the injunction upon the undertaking of the plaintiff, in the event of the Court so directing, to be answerable in damages for the injury caused to the defendants by the granting of the injunction.

PROSECUTION UNDER THE 17TH SECTION OF THE PHARMACY ACT.—THE CHEMISTS' TRADE ASSOCIATION DEFEATED.

At the Oxford Police Court on Tuesday the 28th ult., William Thomas Trafford, of Friar Street, St. Ebbes, in that City, was charged with having sold to George Revill Templeman, Assistant Secretary of the Chemists and Druggists' Trade Association of Great Britain, a certain poison, to wit red oxide of mercury (red precipitate), the same not being labelled with the name and address of the seller, contrary to the statute in such cases made and provided.

Mr. Henry Glaisyer, solicitor of the Chemists and Druggists' Trade Association, appeared for the prosecution, and the defendant appeared in person.

Mr. Glaisyer, in opening the case, quoted the 17th section of the Pharmacy Act, 1868, and said that, in addition to the poisons named in the statute, its provisions had been made to apply to others by virtue of the powers conferred on the Pharmaceutical Society of Great Britain and the Privy Council by section 2 of the Act, amongst other poisons so added was red oxide of mercury, and he put in a print of the *London Gazette*, of December 20, 1869, in proof of the fact. He then related the special facts of this case, and called,

George Revill Templeman, who deposed that he was the Assistant Secretary of the Chemists and Druggists' Trade Association of Great Britain, and resided at Birmingham. On June 15 he came to Oxford and called at the defendant's shop in Friar Street, St. Ebbes, where he asked for a packet of red precipitate, with which he was supplied by a female. He tested the contents of the packet, and found it to be red oxide of mercury, commonly known as red precipitate. Witness put in the packet, which was labelled,

RED PRECIPITATE.—POISON.

W. Paterson, Chemist, 3 Cowley Road, Oxford.

In reply to questions by the defendant, witness said he purchased other things at the same time, viz., turpentine and beeswax, and that he asked for the precipitate last. He did not say he wanted to mix them all together, but that he wished to make a mixture.

The Magistrates' Clerk, addressing the defendant, said: You say you are not guilty. Did you not sell this poison?

The defendant replied: I am not guilty; I know nothing about the sale in question; the business is not all mine; I sublet part of my shop to Mr. Paterson, and it is his business; I wish to call Mr. Paterson.

The case was then adjourned for a short time for Mr. Paterson to attend.

Mr. Paterson, on being sworn and examined by the Magistrates' Clerk, deposed that his name was William Hay Paterson, and that he resided at 3 Cowley Road, Oxford, and not at 100 Friar Street, St. Ebbes, but he rented part of a shop at 100 Friar Street, St. Ebbes, from the defendant; the shop was not divided, but he paid rent for the use of a window.

Are you the defendant's servant, or is he your servant?—If anything, he is my servant.

Cross-examined by Mr. Glaisyer.

You say the defendant is your servant?—Yes.

How do you pay him?—I allow him a commission.

How much?—Ten per cent.

Do you invoice the goods to him?—No.

Does not the defendant order them?—No.

Do not you keep an account of some kind against him?—Yes, I keep an account of what goods he has.

Supposing the goods were lost or destroyed by fire or by any other means, you would expect defendant to pay for them?—Yes, I should expect him to pay for them.

Is the defendant a partner of yours?—No.

If the defendant does not order the goods, who does do so?—I go down and look round, and send what I think proper.

When the defendant pays you I suppose you allow him 10 per cent. of the usual price of the goods?—Yes.

Mr. Glaisyer, addressing the Bench, submitted that the defendant was certainly not an apprentice of the witness, neither was he a servant within the meaning of the Act, and even if this were so the packet was improperly labelled.

One of the Bench (addressing the witness): I suppose if this packet had been purchased at your shop in the Cowley Road it would have been labelled in the same way?—Just the same.

I presume this article can be sold by anyone, so long as it is properly labelled with the name and address of the seller and the word "poison"?

Mr. Glaisyer: It can only be legally sold by a pharmaceutical chemist or a registered chemist and druggist, otherwise another section of this Act would be infringed, and render the seller liable to be sued for a penalty of 5*l* in the County Court. Proceedings such as the present were found to check the illegal sale of poisons almost as effectually as those under the other section. They were less expensive to the defendant, and the Bench had power to mitigate the penalty, which was not the case if proceedings were taken under the other section.

Magistrates' Clerk (to witness): Have you any agreement?—Yes. [Book produced, from which it appeared that the witness was to pay 4*s*. per month for the use of the window, and to allow 10 per cent. on the amount received by the defendant for goods sold.]

Mr. Glaisyer: Have you any other agreement of this kind for the use of other shops?—I think of opening another if this answers.

The magistrates then retired, and upon their return the Mayor said the majority of the magistrates present were of opinion that Mr. Templeman had failed to prove his case, and the summons would be dismissed.

Mr. Glaisyer said he presumed the Bench came to their decision on the ground that the defendant was a servant of Mr. Paterson, and he applied to them to state a case for the superior Court.

This application was refused.

BANKRUPTCIES AND LIQUIDATIONS.

ANDREW BRUNTON, Partick.

THE public examination of the bankrupt took place in the Glasgow Court of Bankruptcy on June 10. There were present Mr. McKittrick, accountant, trustee, and Mr. Daniel Bell, law-agent in the sequestration. Bankrupt deposed that he began business 16 years ago in Partick as a chemist and druggist, and had continued till the present time. For nine or ten years the business paid, but he did not save any money. He kept a book showing his income and expenditure, and he had handed it to the trustee. Dull trade was the sole cause of his failure. He had made up a state of his affairs, which showed liabilities amounting to 577*l*. 15*s*. 6½*d*. and assets of the value of 65*l*. 6*s*. He had given every information to the trustee. The statutory oath was administered.

JOHN LOMAS, Chemical Manufacturer, 7 Fenchurch Street.

A MEETING for public examination was held in this case on June 24 before Mr. Registrar Hazlitt, the bankrupt being also described as of the Wepre Chemical Works, in the county of Flint, and the Canal Side Chemical Works, in the city of Chester. The adjudication was made upon the petition of Mr. Arthur Jackson, of 22 Liverpool Street, City, the act of bankruptcy being the departure of the bankrupt out of England on or about April 16, with intent to defeat or delay his creditors. No accounts were filed, and the

bankrupt did not appear. Upon the application of Mr. Digby, on behalf of the trustee, the Registrar directed a memorandum of non-appearance to be entered.

W. W. YOUNG, Chemist, 225 Jamaica Road, Bermondsey.

THE adjourned meeting for the bankrupt's public examination took place on June 28 before Mr. Registrar Pepys. A statement of affairs was furnished, showing debts 612*l*. 18*s*. 11*d*., against assets 700*l*., the following being entered as creditors:—

	£	s.	d.
Boord & Son, Allhallows Lane	56	0	0
Bowerbank & Son, Sun Street	33	19	0
Barron, Squires & Co., Bush Lane	64	6	4
Begg & Co., Mark Lane	10	10	0
Crosse & Blackwell, Soho Square	41	12	5
Ford & Shapland, Great Turnstile	16	0	5
Flood, W. H., 101 Blackman Street, S.E.	10	7	1
Harding, Dr., East Finchley	11	10	0
Hodgkinson, King & Co., Leadenhall Street	12	18	1
Hills & Underwood, Eastcheap	96	0	0
Hicklin & Washington, Southwark	39	0	0
Huntley & Palmer, Rood Lane	14	15	4
Lees & Co., Charles, Philpot Lane	10	14	7
Maw, Son & Thompson, Aldersgate Street	11	10	7
Peak, Freen & Co., Bermondsey	15	11	1
Ramsey, Davis & Co., Great Tower Street	43	0	0
Thompson, —, 103 New North Road	40	0	0
White Brothers, Philpot Lane	24	10	8
Wilkinson & Co., 1st Borough	13	9	0

No opposition was offered, and his Honour allowed the bankrupt to pass his examination.



CRAWSHAW'S INK-POWDER.

MR. CRAWSHAW, of Fann Street, Aldersgate Street, has introduced packets of powder to sell at 1*d*., 3*d*., 6*d*., and 1*s*., and tins to sell at 2*s*., 5*s*., and 25*s*., yielding an excellent black ink. The smallest packet is sufficient for about the eighth of a pint, and the largest tin will produce 18 gallons of an ink which requires no other manipulation than the addition of water. It makes a perfect solution, and therefore needs no gum to keep the colouring-matter in suspension. The fluid thus made is of course free from any clogging effects on the pen. For export it would seem to be more economical to send colour in concentrated form than with the burden of an immense proportion of water.

GLACIALINE.

WE have tested glacialine, a preservative of meats, milk, &c., during the past month, with highly satisfactory results. It kept a piece of meat quite sweet through three days of thundery weather, with the thermometer at 70 to 85, while another piece kept in similar conditions, but without glacialine, was tainted in half the time.

FLETCHER'S HYDROBROMATE SYRUP.

HYDROBROMIC acid has been found by many practitioners, both in England and America, to be the best compound for administering bromine, and it has also proved a singularly efficient corrective of the unpleasant effects so often consequent on the administration of quinine and iron. In order to give prescribers the opportunity of availing themselves of this property of the chemical, Messrs. Fletcher, Fletcher, & Stevenson, of Holloway, have introduced a Syrup. Ferri et Quiniae Hydrobromat., each fluid drachm of which contains 2 grains of hydrobromate of iron, 1 grain of hydrobromate of quinine, and 30 minims of dilute hydrobromic acid.

KOUMISS, &c.

THE AYLESBURY DAIRY COMPANY have sent us samples of three of their new medical preparations—koumiss, peptonised milk, and artificial human milk. The manufacture of the last was suggested to them by Dr. W. S. Playfair, and chemists will at once see that the idea is quite feasible, and that what is made on a large scale by a practised manipulator is sure to be better than the rule-of-thumb mixtures generally given to infants. The Company are making Chemists their special agents for the supply of koumiss in town and country, and as they supply the product at a cheap rate, and of excellent quality, this is likely to develop into a large trade. The peptonised milk is an article which we should certainly believe in as a dietetic, but we suppose it is not intended that chemists or any one should keep either that or the human milk in stock.

DELAORE'S EXTRACT OF MEAT.

A NEW extract of meat is being brought forward by the Delacore's Extract of Meat Company (limited). The originator of this product is M. Delacore, a pharmaceutical chemist, of Brussels. Mr. Barker, a partner in the firm of Savory and Moore, is one of the directors of the company. The extract is made at Guala Guarchu, which we are told is in South America. It is put up in the usual capsuled jars, but has a distinctive trade mark, an ox reclining, with the legend 'Bœuf couché.' Each shipment is to be sampled and analysed by Professor Attfield, and the article will doubtless establish itself in the English market. Our own examination of the extract leads us to believe that in point of flavour and nutritive value this extract will fully deserve a position in the first rank of products of the kind.

HEDOZONE.

THE makers of Hedozone (Packham & Co., Limited, of Croydon) remind us that we have not yet formally introduced their beverage to the trade. Our offices in this direction are by this time, fortunately for them, almost superfluous. Hedozone has acquired a considerable popularity, and in a recent contest with the Zoedone Company as to right of manufacture and title the Hedozone people were, at all events, not worsted, though the action was not fought through. Hedozone is, of course, a phosphated iron tonic, and it is specially claimed that it is made with distilled water. We have found some samples of it very popular hereabouts during the recent hot weather.

HOW TO AVOID DROWNING.—Dr. McCormac, of Belfast, writes in *Nature* an interesting article to show how anybody may save himself or herself from drowning. A man who cannot swim falls into the water, makes a few spasmodic struggles, throws up his arms, and drowns. A dog falls, or is thrown into the water, and at once begins to walk just as he does on land. He "treads water" in fact, and is practically insubmergible. He has no advantage over man in respect to his weight, and there is no imaginable reason why a human being under similar circumstances should not do as the dog does. Any man, woman, or child who can walk on the land can walk in the water without any previous instruction. Dr. McCormac says that the American Indians always cross the Missouri by "treading water"; the natives of Joanna, an island near Madagascar, come out in this way miles to becalmed ships, to bring fruit or vegetables. The same method is followed at Madras, at the Cape of Good Hope, and elsewhere, and he regards it as extraordinary that people should not pay attention to such a simple means of saving life.



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

Applications for Letters Patent:—

- Alumina.**—No. 2580.—J. Webster, of Solihull, Warwickshire.—A new or improved method of producing alumina, suitable for the manufacture of aluminium. Dated June 14, 1881.
- Ammonia.**—No. 2423.—W. L. Wisc.—A communication from H. Grouven, of Leipzig, Saxony.—Improvements in the treatment of organic substances for the production of ammonia, and apparatus therefor. Dated June 1, 1881.
- Baryta.**—No. 2575.—W. E. Gedge.—A communication from E. J. Maumené, of Lyons, France.—Improvements in the manufacture of baryta (oxide of barium). Dated June 14, 1881.
- Bottles, Decanters, &c.**—No. 2724.—J. Jeffs, of Hanover Street, Islington, London.—Improvements in glass bottles, decanters, and other glassware, for the purpose of rendering the same applicable for advertising and exhibiting. Dated June 21, 1881.
- Bottle Envelopes.**—No. 2814.—W. H. Beck.—A communication from P. Marboeuf, of Cognac, and C. Wilhelm, of Argentat, both in France.—A new or improved machine for manufacturing envelopes for bottles. Dated June 27, 1881.
- Bottle-stands.**—No. 2400.—C. Farrow and R. A. Jackson, both of Great Tower Street, London.—Improvements in apparatus or stands for holding bottles containing effervescent and still liquors. Dated May 31, 1881.
- Bottle-wrappers.**—No. 2512.—H. J. Haddon.—A communication from B. D. Marks, of Louisville, United States.—Improvements in bottle-wrappers. Dated June 9, 1881.
- Bottle-wrappers.**—No. 2513.—H. J. Haddon.—A communication from B. D. Marks, of Louisville, United States.—Improvements in bottle-wrappers. Dated June 9, 1881.
- Capsuling Bottles, &c.**—No. 2608.—F. Wirth.—A communication from F. Fehr, of Wiesbaden, Germany.—Improvements in machines for capsuling bottles and similar receptacles. Dated June 15, 1881.
- Colouring Matters.**—No. 2689.—A. Sansone, of Manchester.—Improvements in the application of colouring matters to fabrics. Dated June 20, 1881.
- Colouring Matter.**—No. 2741.—A. Gough, of Buckingham.—An improved colouring matter for stout and porter. Dated June 22, 1881.
- Composition for Destroying Vermin.**—No. 2695.—W. Hagelsieb, of Hunter Street, Brunswick Square, London.—An improved composition for the destruction of rats, mice, and other rodent animals. Dated June 20, 1881.
- Corkscrews.**—No. 2642.—F. A. Whelan, of Gilbert Street, London.—Improvements in corkscrews. Dated June 17, 1881.
- Desulphurising Liquids and Gases.**—No. 2589.—F. Lux, of Ludwigshafen-on-the-Rhine, Bavaria.—Improvements in and relating to the desulphuration of liquids and gases. Dated June 14, 1881.
- Disinfectant and Antiseptic Compound.**—No. 2361.—T. F. Scott, of Glengall Road, London.—A new or improved disinfectant and antiseptic compound, and the manufacture thereof. Dated May 3, 1881.
- Disinfecting Faecal Matter.**—No. 2345.—W. R. Lake.—A communication from F. Petri, of Berlin.—Improved processes for the preparation and utilisation of materials for the disinfection of faecal and other like matter, which, when disinfected, may serve as manure or fuel. Dated May 27, 1881.
- Dye Colours.**—No. 2274.—W. G. & R. A. White, both of Crayford, Kent.—Improvements in the preparation of dye colours for use in polychromatic printing. Dated May 24, 1881.
- Dyeing.**—No. 2837.—W. E. Gaine, of Hammersmith, London.—Improvements in dyeing. Dated June 28, 1881.
- Dye Products.**—No. 2863.—A. M. Clark.—A communication from C. Collin, of Paris.—Improvements in the manufacture of dye products from indigo and sulphonated derivatives of aniline. Dated June 30, 1881.
- Edible Oils and Fats.**—No. 2496.—A. Fenwick, of Hampstead, London.—Improvements in the preparation of edible oils and fats. Dated June 8, 1881.
- Filling Bottles.**—No. 2510.—R. Bardsley, of Manchester.—Improvements in machinery for filling bottles. Dated June 9, 1881.
- Filter presses.**—No. 2691.—H. J. Haddon.—A communication from A. Collette fils, of Seclin, France.—Improvements in filter-presses. Dated June 29, 1881.

- Filtering.**—No. 2359.—J. F. N. Macay, of Charapotó, Ecuador, South America. Improved apparatus for filtering, which is also applicable to dissolving or extracting constituents from minerals or other substances by solvents or chemical agents. Dated May 28, 1881.
- Filtering.**—No. 2716.—P. M. Justice.—A communication from J. W. Hyatt, of Newark, New Jersey, United States. Improvements in the method of, and apparatus for, filtering water. Dated June 21, 1881.
- Finings.**—No. 2320.—G. W. Ewens, of Bristol. Improvements in the manufacture of finings, and in fining beer, ale, porter, wine, cider, and other fermented and unfermented beverages. Dated May 26, 1881.
- Finings.**—No. 2377.—E. J. T. Digby, of Hammersmith, London. Improvements in the manufacture of finings for refining or clarifying and preserving ales and other liquids. Dated May 31, 1881.
- Food for Cattle.**—No. 2664.—W. Jamaiker, of Berlin. Preparing compressed food for cattle from agricultural produce, residues, and waste, mixed in the proportions described below, and prepared by the action of spontaneous heat. June 18.
- Fountain for Aerated Water, &c.**—No. 2404.—R. Seager, of Ipswich. An improved apparatus or portable effervescent fountain for the production and supply of aerated water or liquors. Dated May 31, 1881.
- Glycerine.**—No. 2462.—C. Thomas, of Bristol, and A. Doméier, of Botolph Lane, London. Improvements in the treatment of soaps to obtain glycerine and other products obtained therefrom, in the treatment of glycerine obtained from soaps, and in apparatus to be used during such treatment. Dated June 4, 1881.
- Glycerine.**—No. 2816.—G. Payne, of Millwall, London. An improved process of treating the spent leys of soap works, chiefly for the recovery of glycerine therefrom. Dated June 27, 1881.
- Gypsum and Magnesia.**—No. 2649.—E. Scheibler, of Berlin. Improvements in the manufacture of gypsum and magnesia. Dated June 17, 1881.
- Manure.**—No. 2306.—W. R. Lake.—A communication from E. Koch, of Paris. An improved process of manufacturing manure. Dated May 25, 1881.
- Manure.**—No. 2850.—S. D. Cox, of Woolwich. An improved process and apparatus for treating fish to prepare the same for use as manure. Dated June 29, 1881.
- Phosphate of Lime.**—No. 2391.—E. Solway, of Brussels. Improvements in the treatment of phosphate of lime. Dated May 31, 1881.
- Purifying Coal-gas.**—No. 2838.—C. F. Claus, of Mark Lane, London. An improved process for the purification of coal-gas. Dated June 28, 1881.
- Purifying Coal-gas.**—No. 2849.—J. G. Hawkins, of Wigan, Lancashire. Improvements in the means and process for purifying coal-gas. Dated June 29, 1881.
- Purifying Coal-gas.**—No. 2865.—C. F. Claus, of Mark Lane, London. Improvements in and relating to the purification of coal-gas, and the recovery of carbonate of soda as a bye-product therefrom. Dated June 30, 1881.
- Purifying Water.**—No. 2747.—G. Bischof, of Hart Street, Bloomsbury, London. Improvements in the purification of water. Dated June 23, 1881.
- Refrigerators.**—No. 2740.—A. S. Haslam, of Derby. Improvements in refrigerating apparatus. Dated June 22, 1881.
- Separating Fluids.**—No. 2810.—F. H. F. Engel.—A communication from G. de Laval, of Stockholm. Improvements in apparatus for separating fluids of different specific gravities. Dated June 27, 1881.
- Separating Solid Bodies, &c.**—No. 2758.—H. J. Smith, of Glasgow. Improvements in machinery or apparatus for effecting the separation of solid bodies from each other or from liquids, and of liquids from liquids. Dated June 24, 1881.
- Stopping Bottles.**—No. 2338.—J. S. Davison, of Sunderland. Improvements in stoppers for closing bottles or other vessels containing aerated, gaseous, or other liquids. Dated May 27, 1881.
- Stopping Bottles.**—No. 2630.—J. Massey, of Nottingham. Improvements in stoppers for aerated-water bottles. Dated June 16, 1881.
- Stopping Bottles.**—No. 2659.—F. W. Woodman, of Brixton, London. An improved bottle-stopper. Dated June 17, 1881.
- Treating Faecal Matter, &c.**—No. 2295.—A. Baron von Podewils, of Munich, Bavaria. Improvements in apparatus for treating faecal and other refuse matter. Dated May 25, 1881.
- Treating Liquid Sewage.**—No. 2790.—G. W. von Nawrocki.—A communication from J. Swieciański and S. Adamczewski, both of Wauschan, Poland. Improvements in evaporating and drying apparatus, especially applicable to the treatment of liquid sewage. Dated June 25, 1881.
- Letters Patent have been issued for the following :—
- Acetate of Soda, &c.**—No. 1424.—W. G. Forster, of Streatham Common, London. Improvements in the manufacture of acetate of soda and other acetates. Dated March 31, 1881.
- Ammonia.**—No. 5478.—H. A. Dufrené.—A communication from la Société l'Azote, of Paris. A new and improved process for the manufacture of ammonia. Dated December 29, 1880.
- Artificial Ear-drums.**—No. 5453.—H. P. K. Peck, of Cincinnati, Ohio, United States. Improvements in artificial ear-drums. Dated December 28, 1880.
- Beverages.**—No. 5144.—T. H. Larmuth, of Kennett Road, Paddington, London. Improvements in the manufacture of unfermented non-intoxicating compounds for the production of still and aerated beverages. Dated December 9, 1880.
- Beverages.**—No. 1204.—R. Bull, of Peckham, London. Improvements in the preparation or production of beverages. Dated March 18, 1881.
- Bottles.**—No. 5161.—E. Breffit, of Castleford, Yorkshire. A new mode or means of making bottles for use with internal stoppers. Dated December 10, 1880.
- Bottles.**—No. 5264.—F. Trotman, of Albert Street, Regent's Park, London. Improvements in bottles for aerated or gaseous liquids. Dated December 15, 1880.
- Bottles.**—No. 71.—T. Marshall, of Old Kent Road, London. Improvements in feeding and other like-shaped bottles. Dated January 6, 1881.
- Carbonate of Potassium.**—No. 184.—E. P. Alexander.—A communication from C. R. Engel, of Paris. Improvements in the manufacture of carbonate of potassium. Dated January 14, 1881.
- Colouring Matters.**—No. 1225.—J. A. Dixon.—A communication from O. Fischer, of Munich, Bavaria. Improvements in the production of colouring matters from para-nitro-benzaldehyde, or from its derivatives and aromatic bases. Dated March 19, 1881.
- Drawing and Preserving Liquids.**—No. 4969.—A. Specht.—A communication from K. W. Weissenborn, of Hamburg, Germany. Improvements in apparatus for drawing beer and other liquids, and for preserving them whilst on draught. Dated November 29, 1880.
- Filtering, &c.**—No. 464.—E. P. Alexander.—A communication from P. Casamajor, of Brooklyn, and C. H. Senff, of New York, both of New York, United States. Improvements in filtering and separating solids from liquid matters, and in apparatus to be employed therefor. Dated February 3, 1881.
- Finishing and Rounding Pills.**—No. 1336.—J. G. F. Richardson, of Leicester. Improvements in finishing and rounding pills, and in the machinery or apparatus to be employed therein. Dated March 25, 1881.
- Ice Machines.**—No. 1247.—H. J. Haddan.—A communication from O. Kropff, of Nordhausen, Germany. Improvements in ice machines. Dated March 22, 1881.
- Liquor Stands or Frames.**—No. 5213.—J. Burley, of Birmingham. Improvements in liquor stands or frames, and other like stands or frames. Dated December 13, 1880.
- Medicinal Compound.**—No. 1283.—W. Williams, of Hampden Street, Saint Pancras, London. The manufacture of a new compound or mixture for cholera, diarrhoea, and medicinal purposes generally. Dated March 23, 1881.
- Respirators.**—No. 390.—E. Rinzi, of Golden Square, and A. A. Berthier, of Sterndall Road, both in London. Improvements in and connected with respirators. Dated January 28, 1881.
- Spectacles.**—No. 5382.—G. W. von Nawrocki. A communication from P. Goerz, of Stuttgart, Germany. Improvements in spectacles. Dated December 22, 1880.
- Stands for Bottles, &c.**—No. 5166.—J. E. Bingham, of Sheffield. Improvements in stands for bottles and similar receptacles. Dated December 10, 1880.
- Stopping Bottles, &c.**—No. 5244.—H. Smith, of Holland Street, Brixton Road, London. Improvements in stoppering bottles, jars, and other similar vessels. Dated December 14, 1880.
- Stopping Bottles.**—No. 545.—W. H. Beck.—A communication from E. Guichardt, of Rheims, France.—Improved means and apparatus for corking bottles containing champagne or other gaseous or non-gaseous liquids. Dated February 9, 1881.
- Stopping Bottles.**—No. 5398.—W. C. Eaton, of Sheffield.—Improvements in apparatus for securing the stoppers of bottles. Dated December 23, 1880.
- Stopping Bottles.**—No. 99.—T. Burns, of Wolverhampton.—Improved means or apparatus for separately securing under lock the corks and stoppers in bottles and decanters and other necked vessels. Dated January 8, 1881.
- Sulphate of Ammonia.**—No. 5504.—W. L. Wise.—A communication from H. Grouven, of Leipzig, Saxony.—Improvements in the production of sulphate of ammonia from the nitrogen of peat turf or other nitrogenous substances, and apparatus therefor. Dated December 31, 1880.
- Sulphuric Acid.**—No. 5146.—W. Weldon, of Burstow, Surrey.—Improvements in obtaining useful products from the residue of the manufacture of sulphuric acid by means of cuprous pyrites. Dated December 9, 1880.

Syphons.—No. 5055.—J. Delord, of Nîmes, France.—Improvements in syphons. Dated December 4, 1880.

Syruping Aerated Beverages.—No. 5402.—J. McEwen and S. Spencer, both of Manchester.—Improved apparatus for "syruping" aerated beverages, which apparatus is also applicable for aerating beer and other liquors. Dated December 23, 1880.

Treating Saccharine Liquids, &c.—No. 197.—W. R. Lake.—A communication from G. B. Boomer, of New York, United States. Improvements in and relating to evaporating, drying, and rendering apparatus for the treatment of saccharine liquids, grain, manure, fatty substances, and other liquid or solid matter. Dated January 14, 1881.

Vanilline.—No. 5282.—G. De Lavie, of Paris. A process for the preparation of vanilline or the aromatic principle of vanilla. Dated December 16, 1880.

Washing or Cleansing Wool, &c.—No. 5438.—W. R. Lake.—A communication from F. Prévost, of Amiens, France. Improved processes of treating liquid that has been used in the washing or cleansing of wool for extracting therefrom fatty matter and manufacturing potash lye, which invention comprises apparatus and means for carrying the said processes into effect, and the purification of the oil obtained from such liquid. Dated December 24, 1880.

Specifications published during the month :—

1879.

2398. D. Moulton. Jugs and cups. 2*d*.

3738. N. Robertson. Stoppers for bottles, &c. 2*d*.

1880.

3898. C. Dickinson. Treating, purifying, and clarifying sewage, &c. 2*d*.

4014. H. A. Bonneville. Preserving animal and vegetable substances. 4*d*.

4143. H. & F. C. Cockey. Apparatus for purifying gas. 6*d*.

4190. S. Wilkes. Stopping bottles. 6*d*.

4197. A. A. Mondolot. Supplying syrups to bottles, &c. 6*d*.

4258. G. Travis. Locking stoppers in bottles, &c. 6*d*.

4309. J. Davies and P. Humphreys. Stoppers for bottles, &c. 6*d*.

4323. A. Ford. Apparatus for the purification of gas. 6*d*.

4356. L. Shapter. Aerated beverages. 4*d*.

4383. P. W. O. Nunn. Abdominal-belts for the prevention of sea-sickness. 6*d*.

4385. C. Dickenson and J. W. Robson. Filter-press. 2*d*.

4400. T. Holliday. Obtaining colours on cotton, &c. 2*d*.

4402. C. Morfit. Consolidating extract of malt. 2*d*.

4405. T. Holliday. Utilising residuary products obtained when producing colours on cotton, &c. 2*d*.

4413. E. O. Day. Feeding-bottle. 6*d*.

4417. C. Winkler. Absorbing and utilising acid gases and fumes. 2*d*.

4431. J. S. Williams. Stands or frames for liquor-bottles. 2*d*.

4433. B. J. B. Mills. Converting refuse and infectious animal matters into gas, &c. 8*d*.

4468. W. Black and T. Larkiu. Furnaces for calcining carbonate of soda, &c. 6*d*.

4469. E. C. H. Krueger. Preparing and preserving natural flowers, plants, &c. 4*d*.

4511. J. Mactear. Furnaces for chemical processes. 10*d*.

4514. W. F. Nast. Manufacture of sugar, &c., from cellulose or ligneous materials. 4*d*.

4519. W. R. Lake. Oxidising or "aging" distilled and fermented liquors. 6*d*.

4520. J. S. Stevenson. Apparatus for distilling ammoniacal liquor. 2*d*.

4522. J. Imray. Economising the uitrous products in the manufacture of sulphuric acid. 4*d*.

4535. G. Wheeler and J. Webb. Feeding-bottles. 2*d*.

4541. W. A. Barlow. Purification of alcohol. 6*d*.

4556. C. D. Alci. Apparatus for drying or desiccating substances with heated air. 6*d*.

4573. F. A. Garty. Recovering indigo from certain materials. 2*d*.

4591. L. B. Bertram. Flexible ink or colour compounds for printing. 2*d*.

4596. W. R. La'c. Hygienic compound. 2*d*.

4603. J. H. Johnson. Treating animal or vegetable substances. 4*d*.

4638. E. W. Allen. Beverage. 2*d*.

4667. L. Gros. Capsules for bottles, &c. 2*d*.

4677. T. F. Henley, treating and utilising date fruit and seed for beverages. 2*d*.

4693. C. T. Bastand. Apparatus for extracting oily and greasy matter from cotton waste, &c. 6*d*.

4721. W. A. Ross. Apparatus for syruping and bottling aerated liquors. 6*d*.

4742. J. Bowling. Manufacture of caustic compounds. 2*d*.

4773. H. J. Haddan. Manufacture of diphenylamine of aniline, &c. 2*d*.

4784. J. McWilliam. Alimentary material for making a beverage. 2*d*.

4814. J. C. Shears. Apparatus for sampling fluids. 2*d*.

4823. A. H. Mason. Manufacture of plaisters. 2*d*.

4827. J. H. Dennis. Salt-cake pans. 2*d*.

4900. H. W. Parrott. Treating night-soil for manufacture of artificial manure. 2*d*.

4908. H. G. Grant. Manufacture of ammoniacal salts. 2*d*.

4950. E. Roach. Stopping bottles, &c. 2*d*.

4966. F. Wirth. Manufacture of colouring matter. 4*d*.

4985. T. Morgan. Manufacture of soda, &c. 6*d*.

5044. H. W. Beckton. Corking or stopping bottles, &c. 6*d*.

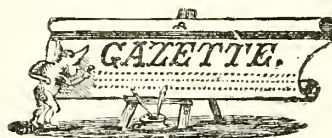
5287. B. E. R. Newlands. Manufacture of sulphate of alumina. 4*d*.

1881.

876. W. R. Lake. Machines for cleaning bottles. 6*d*.

901. H. E. Newton. Filter-presses. 8*d*.

1144. H. J. Haddan. Refrigerators. 6*d*.



LIQUIDATIONS.

ALLARD GEORGE, Tewkesbury, under firm of G. & H. E. Allard & Allard Brothers, chemist, druggist, and seedsman. June 18.

BURT, JAMES, JUN., 77 Tyne Street, North Shields, chemist, druggist, and grocer. July 1.

DYBALL, THOMAS WALTER, 41 Butter Market, Ipswich, registered student of the Pharmaceutical Society, carrying on business with a qualified assistant as chemist and druggist. June 27.

HOGG, THOMAS, Bridge End House, Bideford, chemist and druggist. June 16.

HOLDROYD, SUGDEN, Hunsworth Moor, also called Moor End, Cleckheaton, patent medicine vendor. June 27.

HOLROYD, JOHN JACKSON, 3 Carnaby Street, Leeds, formerly chemist, 90 Meadow Lane, Leeds, chemist's assistant. July 6.

PROCTOR, SAMUEL JAMES, formerly 1 Duke Street, Cardiff, now 323 Commercial Road, Landport, chemist and druggist. (June 17.)

SLIGHT, WILLIAM, LUDINGTON, Scotter, chemist, grocer, and draper. June 6.

WHETHERHEAD, EMILE, 16 Nelson Street, South Bank, county York, chemist and druggist. June 10.

PARTNERSHIPS DISSOLVED.

CHARD, OCTAVIUS EDWARD PEDDLE, and CHARD, FREDERICK JAMES, surgeons, &c., and chemists and druggists, Eccleston Street, and Warwick Street, Pimlico. June 24.

CLEAVER & Co., wholesale and manufacturing chemists and druggists, King's Road, Chelsea. June 10. (Edwin Richardson and Edward Lawrence Cleaver, as regards Richardson.) Debts by Cleaver.

CROSS & WOOD, chemists, druggists, and drsalters, Drake Street, Rochdale. June 13. (Robert Cross and John Wood.) Debts by Wood.

MASSEY, H., & Co., rent collectors and surveyors, drug, chemical, oil, and indiarubber merchants, and general commission and insurance agents, St. Helens. May 21. (Henry Massey and Charley Walton Houseman.) Debts by Massey.

PHILLIPS, W., & Co., pharmaceutical chemists, New Cross Road and Lewisham High Road. May 15. (William Phillips and Francis Dymott.) Debts by Dymott.

PRICE, NAPOLEON, & Co., perfumers, Cumming Street, Pentouville Road, and Old Bond Street, Westminster. June 24. (Napoleon Price and Samuel Alexander Cockburn.) Debts by Price.

TURNER, JOSEPH, & Co., distillers and manufacturing chemists, Redheugh, Gateshead. June 30. (Joseph Turner and Gerard Thomas Chinnery.) Debts by Chinnery.

WOODCOCK & CRAGG, manufacturing chemists, Windy Bank Chemical Works, Hightown, Liversedge. June 28. (Joseph Woodcock and John Cragg.) Debts by Woodcock.

THE third annual National Exhibition and Market of machinery and utensils used in the brewing and mineral and aerated water trades will be held at the Agricultural Hall, London, from October 17 to October 22 inclusive. The exhibition last year is said to have been the largest and best-attended purely trade exhibition ever held in this country, and the forthcoming one promises to eclipse it. Tasting-stalls will be provided this year as before. The offices of the secretary and manager are at 29 Barford Street, adjoining the hall.

Exchange Column.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word.

If name and address are not included, one penny per word must be paid. A number will then be attached to the advertisement by the Publisher of THE CHEMIST AND DRUGGIST, and all correspondence relating to it must be addressed to the "Publisher of THE CHEMIST AND DRUGGIST, Colonial Buildings, Cannon Street, London, E.C.," the envelope to be endorsed also with the number. The Publisher will transmit the correspondence to the advertiser, and with that his share in the transaction will cease.

Deposit of Money.—In order to ensure safety we offer the following system:—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We shall acknowledge receipt to both parties by post-cards, and shall only pay it away on the advice of the remitter. Whether returned to him or paid to the seller, we shall charge a commission of 2½ per cent. on any money thus passing through our hands, and not less than 6d. on any single transaction.

FOR DISPOSAL.

Dental and Surgical.

About five dozen trusses, single and double, in good condition, price 1s. to 1s. 6d. each. Apply, J. Nickson, Ludlow.

Tooth instruments, three keys, three small forceps, gum lancet, 10s. lot. W. R. Stevens, Chemist, Woodberry Town, Stamford Hill, N.

Small portable new dental lathe on stand, 10 inches square, cheap, or would exchange for good shop rounds or patents, 13 Fore Street, St. Austell.

To Dentists.—Upper and lower pieces of vulcanite teeth, suitable for show-cases, 4s. set. J. Thompson, 54 Stanhope Street, Liverpool.

Water-bed, Pumphrey's best quality and full size, used once by lady with fractured leg, cost 7l. 10s., price 3l. 10s.; pair of circular air-cushions, 4s.; three accouchement-belts, different sizes, 8s., quite new. Halford Chemist, 301 New John Street, Birmingham.

Drugs and Chemicals.

4 lbs. potass. iodid. pur., 9s. lb. 45/27.
Cwt. cast. pulv. acid. tart., English, 1s. 8d. per lb., carriage paid (Northumberland). 47/17.

Have about 6 cwt. common gum; will sell cheap for cash, or exchange all or part; samples post free. Insule, Chemist, Hanley.

Fluv. creta gal., 3 cwt., 12s. cwt.; 2 lbs. ol. caryoph. Ang., 2 lbs. ol. cajuput, 2 lbs. creasote, Ang., 6 oz. argent. nit. stick, 6 to oz., 2 lbs. potass. caustic, 3 oz. quine salicylas, 4 oz. thymol, 4 oz. podophyllin, 2 oz. ext. elaterii, 2 oz. strychnia crystals, 2 oz. ext. lactucarium, 4 oz. iodoform, 4 oz. ol. geran. tky., 6 l-oz. chloral hydrate, 25 per cent. off Southall's list. J. Woodend, Chemist, 22 Pitt Street, Liverpool.

Proprietary Articles.

Myers' Royal cattle spice, 20s. per cwt; carriage paid on 5 cwt. upwards. J. & J. Clemisbaw, Bury.

Some Patents.—Heald's dog medicine and Gostling's balls (cheap); send stamp for list. C. B., 2 High Street, Brecon.

Educational.

Botany.—Herbarium (new), containing the official and important indigenous plants indispensable for the examinations, only 10s. 6d. Higginson, Newferry, Birkenhead.

Botany.—Over 100 indigenous plants, including the official, mounted, classed, named, 6s., carriage free. Tully, Tunbridge Wells.

Set of illegible autograph prescriptions (original) 2s. 6d.; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of my successful students at last Minor, 1s. 1d.; lot of cheap, almost new, books, stamp for list. Saunders, Medical Tutor, 79 Gaisford Street, N.W.

Apparatus.

Soda-water machine (large size, Bramah principle) second hand, with gas-generator, large condenser, with dial and water-ganges, with filling machine for patents, also cork bottles and vertical combined steam engine and boiler, to make 1,000 dozen per day. Recipes and instructions for working included, for 60l., at N. G. Wilcocks', Bath.

Bargains.—For sale a fire-extinguisher, holds about 10 gallons, with copper fittings and hose, complete, very useful for washing shop windows, price 3l.; an American drug and spice mill, nearly new, with iron stand extra, worth 5l., for 2l. only; copper carboy, weight about 20 lbs., with lid about 9 inches diameter, very useful for storing seeds, &c., price 14s. "Chemicus," 4 Regent's Terrace, Carr Lane, Hull.

Optical.

Six dozen pebble spectacles, invoice price 12l.; offers wanted. Stevens, Chemist, Eastbourne.

Lawrence's spectacles, about 20l. worth, will sell all or part at a long discount; list and terms on receipt of stamped envelope. Floyd & Hicks, Bury St. Edmunds.

Literature.

Pharmaceutical Journal, unbound, clean, numbers from July, 1876, ending June, 1881; what offers? Wyld, Chemist, Macclesfield.
"Ure's Dictionary," 3 volumes, for Wood's United States "Dispensatory," cash or exchange. 49/27.

Eleven vols. "Pharmaceutical Journal," third series, all complete, 60s., carriage paid; three vols. "Art Journal," 1873 to 1875, 24s. Address, Kirkman, 8 Waterloo Terrace, Lewisham, Kent.

Barton & Castle's "British Medicinal Plants," revised edition, 1877; several hundred accurately-coloured figures; 15s. only (published 1l. 10s.); quite new. M. Percy, 11 James Street, Haymarket, S.W.

Fownes's "Chemistry," 2 vols., 12th edition, new, Everett's "Physics," last edition, new; Lindley's "Botany," 14th edition, new; Wanklyn's "Water Analysis," 4th edition, new; offers wanted. F. D. B. Marchant, Debenham, Suffolk.

Eight yearly vols. "Pharmaceutical Journal," No. II. to No. IX., bound in cloth; also, 12 years' vols. "Chemist and Druggist," bound in cloth; highest offer accepted in cash, drugs, or patents. W. R. Stevens, Chemist, Woodberry Town, Stamford Hill, N.
The new and revised popular Encyclopædia; 154 pages of steel engravings and 14 coloured maps, besides numerous engravings on wood; complete, bound, and clean, in 14 divisions; cost over 7l., price 3l. 10s. A. Shaw, Chemist, Riddings, Derbyshire.

What offers for Chemist and Druggist?—1864, February number wanting; 1865, January and April wanting; 1866, 1867, 1868, 1869 complete; 1870, August wanting; 1871, 1872, 1873 complete; 1874, October wanting; 1875, 1876, 1877, 1878, 1879, 1880 complete; 1881, to July 15; also six Diaries, 1876 to 1881. D. Gibbon, Chemist, Cheltenham.

Attfield's "Chemistry," 6th edition, 8s. 6d.; Garrod's "Materia Medica," 3rd edition, 6s.; Tanner's "Practice of Medicine," 7th edition, 20s.; Pharmaceutical Journal from 1868, 3s., or sing'le vols. 4s. Jones, Pharmacist, Treherbert.

Shop Fittings.

Offer wanted for eight 2-gallon pear-shaped carboys. Hammond, Chemist, Hull.

Quantity 3-oz. clear glass jars with glass covers; 20d. per doz. Bell, 88 Rye Lane, Peckham.

The entire fixtures of eight chemists' shops for disposal; great bargains. Lloyd Rayner, 333 Kingsland Road, London, N.

Twelve strong iron-bound oak store casks, newly painted, three sizes, for shop or warehouse; also a few dozens Calvert's pig powders. Riding, Chemist, Hoxley, Sheffield.

To be disposed of cheap.—The entire fittings of a chemist's shop, in large or small lots. List sent on application. J. C., care of C. Jones & Son, Hanley.

Three 3-gallon pear-shaped window carboys, cut stoppers, filter, Wedgwood mortar; complete brass scales and weights, Avery's gasogene, &c. B., 11 Bridge Street, Goole, Yorks.

Counter-case, bent-glass mahogany ends, fitted with mirror and inner glass shelf, 25 by 16 inches, new, 25s. Halford, Chemist, New John Street, Birmingham.

Six specie-jars—two 22 in. high and 43 in. circumference; one 23 in. high and 40 in. circumference; three 21 in. high and 37 in. circumference. D. Gibbon, Chemist, Cheltenham.

To be Sold.—Two inside-labelled, blue and gold, glass show-bottles, with glass covers, 30 in. high and 46 in. circumference; 11 glass globe show-bottles, 2 gallons, with cut conical spiral stoppers; 14 upright 1-gallon show-bottles, glass stoppers. Apply Mr. Talbot, Sidmouth.

For sale, cheap.—Two 6-ft. nests of mahogany-fronted drug drawers, with glass knobs, each containing 30 drawers; also, two 4-ft. nests and one 2-ft. nest, at 2s. per drawer without labels; counters, shelving-cases, &c., all first-class make. Apply, H. Clark, 8 Mare Street, Hackney.

Wall-case, mahogany, equal to new, all glass front, 9 feet high, 7 feet long, 125s.; window-fittings for window 8 feet or 10 feet long, 30s. and 40s.; flat mahogany case, nearly new, 30 inches by 13 inches, 21s.; one 6 feet by 18, plate glass, 40s.; 6-foot mirror centre-screen, 110s.; mahogany case and desk, handsome, 42s. 6d.; about 300 cases various. Write for list and say kind wanted to R. Tomlinson, Birmingham.

To be Sold.—Nest of drawers, 12; 1-gallon store bottles, 1s. each; 10 2-gallon, 1s. 6d. each; various shop-jars, show-bottles, 2s. 6d. gallon; specie-jars, desks, counter-cases, pill-machines; handsome dispensing-screen, 5 ft. high, 5 ft. 9 in. long; lamps and irons, shelving, iron mortars, cupboards, &c.; handsome cigar counter-case, 12 divisions, gold labelled, others not labelled; tobacco-jars, sheet plate glass in mahogany frame, 5 ft. 10½ in. high, 4 ft. 10½ in. long; 2 mahogany doors glazed with embossed glass, scales, mahogany show-stand, medical books, surgical and tooth instruments; also various stoppered and plain bottles for pomades, eau de Cologne, essences, citrate magnesia, castor-oil, glycerine and lime-juice, 1 oz white vials, graduated; eight tea-spoons, all clean; 20 per cent. off list prices; any quantity may be had; also, white covered pots for cold cream and pomade. 846 Old Kent Road.

3 ft. long, 4 ft. long, 4 ft. 6 long, 5 ft. long, 6 ft. long, 7 ft. long, 8 ft. 8 long, handsome mahogany dispensing-ease screens, as fig. 40, 163, 164, 165 Maw's; 4 and 6 ft. long mahogany dispensing screens; 6 and 7 ft. long handsome mahogany dispensing screens, with mirror centre and a case at each end; 2 ft. and 2 ft. 3 long cases, with desks, as fig. 21 Maw's; 8 upright counter-cases, without desks; 4 ft. 2 and 6 ft. 2 long mahogany flat plate-glass counter cases; quantity bent glass counter cases, all sizes, from 2 feet up to 10 feet long; 5 handsome show stands, as 19 and 54 Maw's; soda water stand, as 63 Maw's; sponge cases, as 90 and 92 Maw's; tooth-brush cases, as 52 and 72 Maw's; 30 mahogany wall-eases, from 2 feet to 20 feet long; 50 nests gold-labelled shop drawers, all lengths; 18 mahogany-top counters, all sizes; 1,500 feet mahogany-faced shelving; mahogany dental cabinet; label-chest, 26 Maw's; bust Hahnemann; leech aquarium; 6 pillar gas-brackets, with sealing-wax jets; 35 composition mortars and pestles, all sizes, from No. 1 to No. 12; quantity iron and marble mortars and pestles; 8 oil-cisterns; sheep ointment and powder mill; quantity shop bottles and jars; window show carboys and specie jars; tea and coffee mills; and every description of goods required by the trade. Lloyd Rayner, 333 Kingsland Road London, N.

Formulæ.

The recipe for making insect-powder, equal to Dalmatian in colour, smell, and efficacy, at the cost of 10d. per lb., 2s. 6d. "Chemist," Mrs. Turnbull, 7 The Crescent, Carlisle.

My formula for perfume, which lately obtained the premium, "having upwards of 170 competitors," I will forward on receipt of stamped addressed envelope and 18 stamps, Address, E. Evans, 12 Derwent Villas, Champion Hill, S.E.

Specific for ringworm, itch, also for scaly diseases of the head, to which young children are so subject; have used it for several years and never known it to fail to cure in a short time; price 2s. 6d. Geo. Smith, 1 St. James' Place, Stratford, E.

Fragrant foaming dentifrice (like "Floriline"); marking ink, *sine silver* (aniline), writing executed defies chemicals; effervescent fruit saline (resembles Eno's); magic neuralgic drops (never-failing remedy); quinine and iron tonic (resembles Pepper's); lime-juice and glycerine (inseparable, white as milk); blue-black ink (non-corrosive, *sine iron or galls*); cherry tooth paste (never ferments, like Gornel's); brilliantine (inseparable, like Rimmel's); pill-coating, pearly white, no mucilage or mastic used; glycerine jelly (perfectly transparent); crimson marking ink; hair restorer (colourless, no deposit, *sine silver*); aromatic vinegar; toilet vinegar (as Rimmel's); plate-powder (like Stevens' "Silicon"); Oleum Flavum Conc., for pomades (colour stable); soluble essence of ginger (like Hay's); corn solvent, clear (not acid); liquor eopaihe comp. c. buchu et matico (mixes clear with water); gonorrhoea paste, excellent (Dr. Ricord's); with many others; send stamp for list, stating wants. Chemical analyses for the trade. The toilet preparations are identical with those prepared by a wholesale West-end firm; others equally good; all inexpensive to make; 5s. each five for 1l.). Readers are cautioned against cheap and worthless imitations. I was first advertise formule in this journal. Note address, "Analyst," care of Mr. Warnes, 34 Gaisford Street, N.W.

Twenty well-tryed recipes for horse and cattle medicine, 2s. 6d. "Chemist," care of Mr. Edwards, Wye, Kent.

The fact of having had so many repeated applications from same persons for other receipts after once supplying has induced me to increase my list, which I shall be glad to send on receipt of stamped envelope. Under-mentioned are selected, being at present most saleable:—"Effervescent Depurative Saline," *facsimile* of Eno's, costs 10d. lb., entirely soluble, equally nice, keeps well. "Red Rose Lotion" (Erasmus Wilson's recipe), invaluable skin depurative, removes irritation, redness, sunburn, freckles, tan, &c., delightfully sweet and cooling, resembles Sulpholine, one-eighth cost. "Lime Cream and Glycerine," inseparable, creamy milk-white, best in market, never turns rancid, 2s. 6d. gallon. "Tonic Hair Lotion" (cantharides, rosmary, &c.), simple, cooling, refreshing, large bottles for 1s., profitable. "Foaming Dentifrice," really nice, equal to Floriline, only costs one-eighth; "Amygdaline Balm," most elegant emulsion, softens the skin, no stickiness, rapidly absorbs, better liked than glycerine jelly; "Hair Cleaner" (for the million), 3d. packet, cost 1d., makes half-pint splendid wash, cleanses and cools the head, must sell; "Cantharidine Pomade," more reliable than half advertised hair producers, cheap, good pomade for general use; "Lavender Water," most refreshing perfume manufactured, equals Sainsbury's; "Cold Cream," excellent, elegant, and most reliable; "Bark Syrup" and "Phosphated Fruit Syrup," mixed 1 ox. to bottle, aerated water form, splendid revivifying potations, the former resembling "Rubine," latter Zoedone, one-fourth cost; recipes 1s. 1d. each, three for 2s. 6d., post free, with full directions and all particulars, &c., by T. Brooks, Chemist Louth, Lincolnshire

Miscellaneous.

160 oz. ol. lavand. Ang., sample ounce post free 8s. 6d.; 2-gallon copper-still, with worm, 25s; card-printing machine. Cumber's Mitcham Laboratory, Wandsworth.

Large quantity emp. adhesiv.; emp. cer. saponis; 30 cwt. Mayne's sulph., in 2-cwt. casks; 4 dozen syphons; 40 lbs. ol. limon. super. nov. Harrop, Chemist, Middleton, Lancs.

3 dozen Cathery's selzinc, 2s. size, 12s. dozen; 4 gross gutta-percha sticks (3d. size), for tooth-stopping, 7s. 6d. gross; cash with order. Lockwood, Chemist, Sheffield.

Forty deal boxes, with lids, 11 by 9 by 4; 40 10½ by 8½ by 7; 12 stoneware barrels, round, labelled with Royal arms, bung and tap holes. Kendall, Chemist, York.

Muter's "Chemistry" (new), two British Pharmacopœias (good condition), two Maw's swimming belts (new); what offers? J. Lea, Shakeford, Market Drayton.

Bicycle, 50-inch, by Bayliss, Coventry, nearly new, cost with extras 15l., will take 10l. or exchange for tricycle. Miller, 3 Choumont Grove, Peckham.

Almost new 18-carat gold curb albert, stamped on every link, weighs 3½ oz. Troy, cost 18l., price 13l. J. Riley, 268 New Liverpool Street, Salford.

Jeye's "Perfect Purifier," 24 ls. bottles, 21s. 6d. bottles, 34 3d. bottles, 6 gallon drums; 24 4d. tablets soap; 49 ls. bars soap; now at Camden Station, London; 45s. the lot. Townley, Chemist, Keswick.

Nest of 55 dovetailed painted drawers, unlabelled, price 30s.; Howe's eight-guinea treadle sewing-machine, in perfect working order, with book of instructions, 4l. each. "B." 11 Bridge Street, Goole.

Eight gross ¼-lb. mustard-tins, 12s. gross or offers. Craven, Batley-Carr.

Choke-bore breechloader, double-barrel, 12-gauge, central-fire, patent bar, rebounding locks, and all improvements, 5l.; unsold, and worth double. Halford, New John Street, Birmingham.

Bargains.—A good air-bed (10 tubes), in perfect order, 5 feet wide, 6 feet long, with bellows for inflating same; a mahogany glass case, as Maw's, fig. 43, 3 feet long; also six 2-gallon pear-shaped carboys. B. Lemmon, Hythe, Kent.

Sale or exchange.—Owing to removal I have a long list of articles to dispose of—patents, respirators, chest-protectors, sponge-bags, and various, at half cost, or offers in something useful; would take good pigeons in exchange. Cockburn, Chemist, Haswell, Durham.

190 white earthenware jars, 5-oz. and 10-oz., with shives to fit same, the lot packed in box, 14s. 6d.; "Chemist and Druggist," six years, lot 16s. 6d.; ninety *Pharmaceutical Journals*, 2s. 6d.; large beam scales and weights, 3l. 8s.; open to exchange for lot or separate. Stead, Lees, Manchester.

Nine pairs tooth-forceps, 25s.; surgeon's pocket, comprising lancets, knives, tenaculum, &c. 15s.; Halse's 12-cell battery galvanic machine, good condition, offers; electro-plated galvanic machine for window, 15s.; capital drying-closet, for powders, lozenges, &c., metal shelves and steam-pipes coiled under each shelf; several dozens capital sars, in 6-ounce flats, labelled or not, 3s. per dozen, packed free on rails; 7 volumes Kenny Meadows' Shakespeare, 20s., or useful exchange. Moore, Cheltenham.

Quantity of Beaufoy's acetic acid, 3d. lb.; gum tragacanth, common, 6d. lb.; about two dozen old trusses, two breast pumps, mahogany box (lock and key), 2s. 6d. each; office desk and stool, mahogany top, painted oak, outside drawers attached, 3l. 3s., coals 5l.; oil-cistern in three compartments, about 30 gallons each, price 25s.; four oil-cisterns holding 4 to 8 gallons each, brass taps, suitable for counter use, 2s. each; small old counter, mahogany top, 6s. B. Wood, New Pelton, Halifax.

WANTED.

A mould for making soap-tablets, six to 1b. 46/39.

Apparatus for spreading adhesive and other plasters. 47/2.

Cobden's pills (cheap), Brandreth's capsicum plasters, African hair-restorer. 48/20.

Two three-gallon swan-necked window carboys, cut stoppers. Ford, Chemist, Kirmuir.

"Year-book of Pharmacy" for 1880. State price to A. Billinton, 117 Westgate, Wakefield.

A small tincture-press, or the screw part only. Bell, Cheshire & Don, 88 Rye Lane, Peckham.

Tooth-forceps, in good condition, also soda-water rack and stand; state full particulars. Laverack, Malton.

A set of tooth instruments, in good condition, second-hand; state price. W. Hannaford, Chemist, 123 Granby Street, Liverpool.

Bentley's "Manual of Botany," Lindley's "School Botany," "Selecta & Prescriptis;" state prices. 49/20.

Attfield's "Chemistry," Parrish's "Pharmacy," Piesse's "Perfumery," Squire's "Companion," latest editions; state price. 48/29.

Set or part set dentists' forceps; stopping, &c., instruments, in case. Description, condition, price, to H., 31 Oldhall Street, Liverpool.

Second-hand, latest editions, Wills's "Pharmacy," an illustrated "British Botany," and Garrod's "Materia Medica." Hall, 29 Glendale, Albert Park, Manchester.

One first-class specie-jar, 30 to 33 inch, without stand; state size, design, lowest price, and full particulars. R. T. Richardson, 39 Smith-down Road, Liverpool.

Wills' "Materia Medica" and "Pharmacy," Attfield's "Chemistry," cheap. State editions and price to H. C., 205 Soho Road, Handsworth, Birmingham.

Good tank or tanks for benzoline, to hold 200 to 300 gallons; Royle & Headland's "Materia Medica," Clater's "Horse and Cattle Doctor," latest editions, all in good order. Daykin Chemist, Ripley, Derbyshire

Obituary.

DANIEL.—On June 17, Mr. John Daniel, chemist and druggist, Cheltenham Road, Bristol. Aged 29 years.

DOUGLAS.—On June 4, Mr. Thomas Douglas, chemist and druggist, Jarrow-on-Tyne. Aged 66 years.

MILNES.—On May 31, Mr. Jonas Milnes, chemist and druggist, Tetbury. Aged 49 years.

ROGERS.—On May 6, Mr. Arthur Robert Rogers, chemist and druggist, Newmarket. Aged 42 years.

STEVENS.—On June 25, Mr. John Stevens, pharmaceutical chemist, High Street, Brosely. Aged 55 years.

WAINSWRIGHT.—On July 3, Mr. Thomas Jackson Wainwright, of Pontefract, the oldest tradesman in the borough. Aged 73 years. The deceased gentleman only a few months ago retired from business as a chemist and druggist and seedsman, having been in business for 52 years in Pontefract. He had purchased an estate at the Mount. He was elected to the Council Chamber in 1845, but after his term of office never again sought municipal honours, though as a public man he filled every parochial appointment in his native town, and was deservedly respected by all classes.

WHARRY.—On June 13, Mr. Wharry, of Chippenham, Wilts. Aged 70 years. He had been engaged as a chemist and druggist for a period of 55 years. He was apprenticed with Mr. Lowden in Fleet Street, London, in 1826, and commenced business on his own account in 1832. He was for many years a member of the Town Council and an Alderman. He filled the civic chair in 1863 and 1864 to the satisfaction of his fellow-townsmen, and he now leaves behind him a large circle of sorrowing friends.

Foreign and Colonial

THE AMERICAN PHARMACEUTICAL ASSOCIATION will hold their annual meeting this year at Kansas City, Missouri, the furthest western point to which they have yet travelled.

PETROLATUM is to be the name of the imitation of vaseline which it is intended to introduce into the next U.S. Pharmacopœia. The Committee first fixed on the name Saxolinum, but afterwards found that that name had already been copyrighted.

GAS FROM CASTOR OIL.—At the Jeypore Gasworks the gas is principally produced from castor oil. From one muid of castor oil (82 lbs.) 1,000 cubic feet of gas, of 18½-candle power, are produced. The average price of the oil is 24s. 1d., and the working expenses amount to 8s. 6d. per 1,000 cubic feet. The few private consumers of the gas pay 35s. 10d. per 1,000 cubic feet.

TOBACCO MONOPOLY IN THE PHILIPPINE ISLANDS.—By a decision of the Spanish Government just gazetted the State monopoly of tobacco in the Philippine Archipelago will cease next year. It has been established about 100 years. The natives have been compelled to grow tobacco, hand over a definite quantity to the Government, and destroy the rest of the crop. Spain has annually received 300,000*l.* worth of tobacco.

CINCHONA IN AFRICA.—A very interesting experiment is to be tried in West Central Africa by the members of the Livingstone (Congo) Inland Mission. We understand that seeds of the different species of cinchona, which have been obtained from the Government plantations in India, are to be sent out to them with a view to ascertaining whether it could be successfully cultivated in the mountain valleys of the Congo.

ORIENTAL SHERBETS (by Dr. X. Landerer).—Cooling drinks are reckoned among necessities in Oriental countries during the summer months. They are called "scherbets" when they are sweet and "bosas" when acid. The latter are like vinegar, and in Egypt one is made by infusing tamarinds in water. At all the street corners of Constantinople, Alexandria, and Smyrna men are found selling syrups of

agriot cherries or lemons and iced water. This year these sherbetziden have made their appearance in Athens, crying "Sherbet tis Poleos," Polis, or great town, being the universal Eastern name for Constantinople. They call attention to their wares by jingling three or four drinking-glasses in their hands.

DRUGS FOR JAPAN. In an American report on the trade of Nagasaki (Japan) we note the statement that the trade in drugs and medicines exhibits encouraging results. Until a few years ago the greatest quantity of drugs and medicines imported into Japan came from England, France, and Germany, but, through the enterprise of American merchants, the bulk of the business has been diverted to the United States. It is stated that the American products have now taken firm hold, and are the most popular in the Japanese market. This trade, however, is so far limited to fine medicines. The coarser qualities for manufacturing purposes appear to be supplied more cheaply by England.

PHARMACEUTICAL LAW SUIT IN PARIS.—M. Rigaud, the head of the houses of Rigaud & Co. and Grimault & Co., has lately brought an action against some rivals under the following circumstances. M. Rigaud is the proprietor of preparations called the pepsic peptones of Chapoteaut, and he is also proprietor of a journal called *La Tribune Medicale*. In that journal an article was inserted reflecting unfavourably on a peptone of a M. Defresne. A letter in reply from Defresne was only partially inserted in the *Tribune*. Then Defresne circulated his letter with comments of his own otherwise, and the editors of two other journals, *Le Medecin*, and *Le Moniteur de la Polyclinique* made their comments sneering at Rigaud, and implying that he had been previously convicted of falsification in certain of his specialties. M. Rigaud brought an action against Defresne and the two editors, and seems to have proved that the allegations concerning himself were false, but the court declined to give him the 20,000 francs damages which he demanded, and considering that Rigaud had begun the fight let the defendants off with a fine of 100 francs each and a few supplementary expenses.



THE trade returns of the past month are indicative of a steady business. The imports for the month are valued at nearly 31,000,000*l.*, as against 37,500,000*l.* in June, 1880. The greater part of this decline is made up by raw materials of our manufactures, and is, therefore, suggestive of dulness; but last month's report was exceptionally favourable, and the fluctuations in the arrivals of such goods are very considerable. The exports for the month amounted to 18,804,397*l.*, against 18,462,881*l.* in June, 1880, an improvement of less than 2 per cent. The following were the figures concerning the chemical trade of the country:—

	June, 1880	June, 1881
Alkali	617,658 cwt.	617,629 cwt.
Other Chemicals ..	201,341 <i>l.</i>	191,849 <i>l.</i>
	183,216 <i>l.</i>	208,527 <i>l.</i>

There has been a steady market for most chemicals during the month. Soda carbonate and caustic have become to some extent scarce, and have sold in large quantities at slightly stronger prices, the former at 10s. 3d. to 10s. 6d., the latter at 9s. 9d. to 10s. 3d. Potash salts are unchanged, except that chloride is ½*d.* cheaper, at 5½*d.* Bleaching powder still sells steadily at 5s. to 5s. 3d. It is reported that alkali contracts for forward delivery have been concluded at fractionally advanced rates, a fact indicative of buyers' belief in a higher scale of prices a little later on.

Citric acid has been rather dull at 1s. 11½d., but is now stronger, and is quoted 1s. 11½d. to 1s. 11¾d. Tartaric is firm at 1s. 7¾d. to 1s. 8d., and cream of tartar, though freely bought, seems to be in sufficient supply to meet all requirements, and yet allow of a slight concession to buyers, the present price being 2s. per cwt. lower than last month.

Saltpetre has rather recovered for crude, but refiners' prices are unchanged. Refined borax is 1s. higher, and is said to be getting scarcer.

No change in ammonia, but some tendency to business manifested in sulphates.

Our Smyrna letter, on another page, will give the latest and most trustworthy particulars as to the prospects of the opium crop. It must be remembered that, besides the enormous supply likely to be furnished from Asia Minor, the present speculative holders may at any moment give a further impetus to the decline by putting their own possessions on the market, or they may check that decline by some action not yet thought of outside their circle. Morphia is now quoted 6s. 3d., with a probability of a still further decline.

CAPE ALOES scarcely maintain the recent advance. Balsam copaiba still continues scarce, but, with a little better prospect of larger arrivals, the price has fallen 2d. per lb. Cubebs mark a further slight advance. Camphor is very quiet, and the market has declined a further 2s. 6d. Price for refined has not been altered.

ALMOND OIL is 1d. dearer at 1s. 3d. Castor is unchanged, notwithstanding large arrivals. Cod-liver oil is the turn dearer, and will probably advance further before the winter.

GUMS.—Assafoetida commands rather higher prices, as do also copal and sandarac. On the other hand, gamboge, guaiacum, and myrrh have a slightly downward tendency.

CINCHONA is accumulating to a very large extent, the stock in the port of London amounting to over 37,000 packages. The point seems to have been reached when the supply can more than meet the demand, unless under very exceptional circumstances, and it is likely that a period of low price for quinine will now set in. At present, as will be seen, the prices for English and French manufacture are abnormally high in comparison with those for German make, in consequence of special contracts. It is quite certain that, for some time to come, the arrivals of bark will continue to increase, and it is probable that the proportion of the imports rich enough in alkaloid to be worth working will also become larger. That a further reduction will result in the price of quinine, if no exceptional demand should occur, is almost certain, and it may be considerable.

Holders of South American barks who have tried to maintain prices for some time and have refused to let their stocks go have lately shown more inclination to meet the market, and the consequence has been rather more extensive transactions at declining prices. It must be noted that buyers at the last sales seemed more willing to do business, and the demand is evidently strong. As there is often a large market for quinine in the summer a temporary improvement would not be surprising.

One of the chief influences affecting the cinchona market has been the introduction of the so-called Cuprea barks, which seem to be well suited for manufacturing purposes. These barks come from the State of Santander, in Columbia, and it is yet unknown, we believe, to what extent a supply from that source may be expected. The bark is named "Cuprea" from its copper-looking appearance. Present prices for this bark vary from 1s. 10d. to 2s. 6d.

OILS.—There has been a brisker market in linseed and rape oils since our last. The former is now quoted at 26½ 10s. to 27½, while rape, in consequence of higher prices abroad, has advanced to 28½ 12s. 6d. spot to August, and 28½ 10s. buyers, and 28½ 15s. sellers from September-December. English refined is worth 30½ 12s. 6d. Olive has also been more freely dealt in than for some months past, and better prices have been obtained in consequence of the firmness of holders. For Palermo 38½ has been obtained, and 35½ has been paid for about 30 tons of Mogador, with further buyers at that price. For cocoanut the demand has been dull, and fish oils have been neglected.

The petroleum market has been very quiet during the month, and prices have still further receded. The present quotations are 6¾d. to 7d. for spot and month, and 7d. to 7¾d for September-December. Turpentine has relaxed from 35s. to 31s. in consequence of abundant arrivals.

Monthly Statement of the Stocks, Landings, and Deliveries of the following Goods at the Port of London from January 1 to June 30, 1881 and 1880.

	Stocks		Imports		Deliveries	
	1881	1880	1881	1880	1881	1880
Aloes.....cs	3,047	1,298	1,421	1,205	1,597	1,330
".....kegs	1	12	6	1	6	—
".....gourds	258	280	381	55	363	500
Aniseed, Star.....chts	919	368	822	157	255	269
Arrowroot.....cks	12,857	14,286	7,021	9,636	6,533	5,919
".....bxs & tins	8,499	14,796	2,889	6,049	4,305	5,638
Balsam.....cks, &c.	10	49	182	92	229	124
Bark, Medicinal						
cks, &c.	1,250	552	2,039	1,926	1,686	2,016
srns, &c.	36,446	19,147	56,193	32,498	44,891	31,635
Borax.....pkgs	815	440	1,030	152	642	268
Bees' wax, bls & srns	1,001	659	383	448	379	652
".....cks & cs	1,560	2,033	822	1,018	1,101	1,471
cakes	10	227	220	277	328	58
Wax, Jap. veg. pkgs	6,467	11,011	2,229	10,837	2,912	2,594
Camphor.....pkgs	7,759	8,138	5,942	8,652	3,489	5,708
Cardamoms.....chts	651	413	921	568	486	426
Coco. Ind. bags, &c	862	1,295	333	191	358	215
Colombo root pkgs	1,110	395	1,793	39	1,176	94
Cream Tartar.....cks	97	182	99	168	94	101
Cubebs.....bgs	98	98	—	—	—	—
Dragonsblood.....chts	263	162	232	214	118	111
Galls, E.I.....cks & cs	3,005	3,878	6,322	11,016	4,348	8,676
M'iterranean sks	2,966	567	3,626	901	1,278	792
Gum—						
Ammoniac.....pkgs	301	386	21	8	65	48
Animi and Copal						
pkgs	4,480	2,106	5,962	2,334	4,348	2,813
Arabic, Barbary						
pkgs	1,208	2,288	535	2,150	1,025	1,325
Turkey.....	1,977	3,091	1,843	2,282	1,504	1,828
E.I.....	2,829	2,032	2,499	1,059	1,363	860
Assafoetida.....	463	316	544	137	336	170
Benjamin.....	2,794	2,264	1,299	2,897	1,784	1,427
Damar.....	3,262	4,763	1,375	5,415	1,691	1,828
Galbanum.....	19	12	18	—	3	—
Gamboge.....	283	167	248	161	142	117
Guaiacum.....	31	58	72	36	79	40
Kino.....	21	34	20	9	27	7
Kowrie.....tins	654	538	999	710	1,611	561
Mastic.....pkgs	132	126	20	24	17	16
Myrrh, E.I.....	213	157	437	129	339	114
Olibanum.....	6,970	3,594	9,988	6,767	5,193	4,751
Sandarac.....	208	345	607	365	614	662
Senegal.....tins	9	21	16	15	20	4
Tragacanth pkgs	2,115	2,637	1,565	1,175	1,061	800
Ipecac.....cks & bgs	185	113	375	507	318	273
Jalap.....bils	234	238	232	80	226	185
Nux Vomica.....pkgs	1,456	1,146	4,456	402	3,688	327
Oil—						
Castor.....cks	14	91	446	483	493	425
.....cs	10,096	14,007	12,747	22,617	10,176	14,933
Palm.....tins	392	95	631	2,472	1,624	1,360
Cocoanut.....	10,945	5,949	8,102	8,550	5,013	5,621
Olive.....cks, &c.	1,672	1,251	3,541	1,751	2,176	1,705
Aniseed.....cs	140	229	70	432	174	267
Cassia.....cs	421	349	125	43	9	10
Opium.....chts, &c.	1,659	910	898	556	1,160	963
Rhubarb.....chts	834	1,001	809	645	688	867
Sassaaparilla.....bils	455	464	1,059	754	1,153	857
Senna.....bils, &c.	1,686	1,512	1,285	1,472	1,512	1,419
Shellac.....chts	34,748	39,772	18,985	16,251	15,478	11,155
Turmeric.....tins	2,799	2,983	704	1,619	830	1,080
Vermilion.....	82	145	5	95	24	64

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mincing Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

	Last Month		This Month	
	s. d.	s. d.	s. d.	s. d.
ACIDS—				
Acetic per lb.	0 3 $\frac{3}{4}$ to	0 0	0 3 $\frac{3}{4}$ to	0 0
pure	0 5 ..	0 9	0 5 ..	0 9
glacial	1 0 ..	1 11	1 0 ..	1 11
Benzoic Sulphimate ..	6 0 ..	0 0	6 0 ..	0 0
Ex. Gum. per oz.	0 9 ..	0 0	0 9 ..	0 0
Citric	2 0 ..	0 0	1 11 $\frac{1}{2}$..	1 11 $\frac{1}{2}$
Gallic	4 3 ..	0 0	4 3 ..	0 0
Hydrochlor. per cwt.	5 0 ..	7 0	4 6 ..	7 6
Nitric	0 3 ..	0 4	0 3 ..	0 4
Oxalic	0 4 $\frac{1}{2}$..	0 0	0 4 $\frac{1}{2}$..	0 0
Sulphuric	0 1 ..	0 0	0 1 ..	0 0
Salicylic	8 0 ..	8 6	8 0 ..	8 6
Tannic	1 7 ..	2 8	1 7 ..	2 8
Tartaric English ..	1 7 $\frac{1}{2}$..	1 8	1 7 $\frac{1}{2}$..	1 8
foreign	1 7 $\frac{1}{2}$..	0 0	1 7 $\frac{1}{2}$..	0 0
ANTIMONY crude .. per cwt.	40 0 ..	42 0	40 0 ..	42 0
star	57 0 ..	58 0	58 0 ..	57 0
ARSENIC, Imp.	24 0 ..	0 0	24 0 ..	0 0
powder	10 6 ..	10 9	10 6 ..	10 9
BRIMSTONE, rough ... per ton	107 6 ..	117 6	107 6 ..	117 6
roll .. per cwt.	8 6 ..	9 6	8 6 ..	9 6
flour	10 3 ..	12 6	10 9 ..	12 6
GLYCERINE, German				
refined	72 0 ..	88 0	72 0 ..	88 0
crude brown	50 0 ..	52 0	50 0 ..	52 0
IODINE, dry	0 6 ..	0 6 $\frac{1}{2}$	0 6 ..	0 6 $\frac{1}{2}$
MAGNESIA, calcined .. per lb.	1 0 ..	1 6	1 0 ..	1 6
Hwds.	5 0 ..	0 0	5 0 ..	0 0
MERCURY	125 0 ..	0 0	125 0 ..	130 0
MINIUM, red	16 9 ..	17 0	16 9 ..	17 0
orange ..	25 6 ..	29 6	25 6 ..	29 6
PRECIPITATE, red .. per lb.	3 0 ..	0 0	3 0 ..	0 0
white	2 11 ..	0 0	2 11 ..	0 0
PRUSSIAN BLUE ..	0 0 ..	0 0	0 0 ..	0 0
SANTONINE	21 6 ..	0 0	21 6 ..	0 0
SALICINE	7 6 ..	0 0	7 6 ..	0 0
THYMOL	25 0 ..	0 0	25 0 ..	0 0
SALTS—				
Alum	120 0 ..	0 0	120 0 ..	0 0
powder	147 6 ..	0 0	147 6 ..	0 0
Ammonia:				
Carbonate	0 6 $\frac{1}{2}$..	0 6 $\frac{1}{2}$	0 6 $\frac{1}{2}$..	0 6 $\frac{1}{2}$
Hydrochlorate, crude,				
white	0 ..	760 0	0 ..	760 0
Sulphate	395 6 ..	406 0	400 0 ..	410 0
Argol, Cape	65 0 ..	98 0	80 0 ..	98 0
Red	80 0 ..	80 0	65 0 ..	80 0
Oporto, red.	36 0 ..	36 6	36 0 ..	36 6
Sicily ..	0 0 ..	0 0	0 0 ..	0 0
Bleaching powd.	5 0 ..	5 3	5 0 ..	5 3
Borax, British refnd. ..	60 0 ..	63 0	61 0 ..	63 0
Calomel	2 8 ..	0 0	2 8 ..	0 0
Chloral hydrate, Saame's ..	4 2 ..	4 4	4 2 ..	4 4
Liebreich's ..	5 6 ..	6 0	5 6 ..	6 0
Copper:				
Sulphate	19 0 ..	19 3	19 0 ..	19 3
Copperas, green. per ton	45 0 ..	0 0	45 0 ..	0 0
Corrosive Sublimate p. lb.	2 1 ..	0 0	2 1 ..	0 0
Cr. Tartar, French, p. cwt.	120 0 ..	121 0	118 0 ..	119 6
brown ..	95 0 ..	0 0	95 0 ..	0 0
Epsom Salts	4 0 ..	4 9	4 0 ..	4 9
Glauber Salts	4 3 ..	5 6	4 3 ..	5 6
Magnesia: Carbonate ..	42 6 ..	0 0	42 6 ..	0 0
Pond, Hwds.	72 0 ..	0 0	72 0 ..	0 0
Morphia Murias ..	7 3 ..	7 6	6 3 ..	0 0
Phosphorus	1 11 ..	2 0	1 11 ..	2 0
Potash:				
Bichromate	0 6 ..	0 0	0 6 ..	0 0
Carbonate:				
Potashes, Canada, 1st				
sort	24 0 ..	24 6	25 0 ..	26 0
Pearlshes, Canada, 1st				
sort	38 0 ..	0 0	37 0 ..	0 0
Chlorate	0 6 ..	0 0	0 5 $\frac{1}{2}$..	0 0
Prussiate	0 9 $\frac{1}{2}$..	0 10	0 9 $\frac{1}{2}$..	0 10
red	1 11 ..	0 0	1 11 ..	0 0
Sulphate	8 6 ..	9 0	8 6 ..	9 0
Tartar (see Argol and Cream of Tartar)				
Potassium:				
Bromide	1 5 ..	1 6	1 5 ..	1 6
Chloride	8 0 ..	0 0	8 0 ..	0 0
Iodide	8 0 ..	0 0	8 0 ..	0 0
Quinine:				
Sulphate, British, in				
bottles	11 0 ..	0 0	10 0 ..	0 0
Sulphate, French ..	11 0 ..	0 0	11 3 ..	10 6
Sulphate, German ..	10 0 ..	0 0	8 3 ..	8 6
Sal Acetos	0 6 $\frac{1}{2}$..	0 0	0 6 $\frac{1}{2}$..	0 0
Sal Ammoniac, Brit. cwt.	44 0 ..	45 0	44 0 ..	45 0

	Last Month		This Month	
	s. d.	s. d.	s. d.	s. d.
Saltpetre:				
Bengal, 6 per cent. or				
under	20 3 to	20 9	20 9 to	21 3
Bengal, over 6 per cent.				
per cwt.	19 6 ..	20 0	19 9 ..	20 6
British, refined ..	24 9 ..	26 6	24 9 ..	26 6
Soda: Bicarbonate ..	10 0 ..	0 0	10 3 ..	10 6
Hwds.	45 0 ..	0 0	45 0 ..	0 0
Carbonate:				
Soda Ash .. per deg.	0 1 $\frac{1}{2}$..	0 0	0 1 $\frac{1}{2}$..	0 0
Soda Crystals per ton	66 3 ..	67 6	66 3 ..	67 6
Caustic	9 6 ..	10 0	9 9 ..	10 3
Hyposulphite, per cwt.	8 0 ..	0 0	8 0 ..	0 0
Nitrate	14 3 ..	0 0	14 3 ..	0 0
Zinc Sulphate ..	12 0 ..	14 0	12 0 ..	14 0
SUGAR OF LEAD, Whitecwt.	36 0 ..	38 0	36 0 ..	38 0
Brown, cwt.	26 0 ..	0 0	28 0 ..	0 0
VERDIGRIS	0 10 $\frac{1}{2}$..	1 2	0 10 $\frac{1}{2}$..	1 2
VERMILION, English ..	2 5 ..	0 0	2 5 ..	0 0
China ..	1 10 ..	1 11	1 11 ..	2 0
DRUGS.				
ALOES, Hepatic per cwt.	80 0 ..	150 0	70 0 ..	140 0
Socotrine ..	55 0 ..	200 0	55 0 ..	180 0
Cape, good ..	52 0 ..	71 0	50 0 ..	45 0
Inferior	40 0 ..	51 6	43 0 ..	49 6
Barbadoes ..	45 0 ..	160 0	50 0 ..	160 0
Curacao ..	38 0 ..	65 0	40 0 ..	80 0
AMBERGRIS, grey	90 0 ..	115 0	90 0 ..	120 0
BALSAM—				
Canada	1 0 ..	1 1	1 1 ..	1 2
Capivi	2 6 ..	2 9	2 4 ..	2 8
Peru	10 0 ..	10 6	10 0 ..	10 6
Tolu	2 3 ..	2 4	2 3 ..	2 4
BARKS—				
Canella alba	15 0 ..	18 0	15 0 ..	18 0
Cascarilla	20 0 ..	24 0	20 0 ..	24 0
CINCHONA—				
Calisaya, good and fine per lb.	5 6 ..	7 6	4 6 ..	6 0
medium	2 0 ..	4 6	2 0 ..	4 6
N. Granad., fair to fine ..	4 6 ..	7 11	2 6 ..	3 6
mid. to fair ..	2 0 ..	4 0	1 6 ..	2 6
Columbian, fine	3 0 ..	3 11	2 4 ..	3 4
ord. to fair ..	0 6 ..	2 0	0 6 ..	2 0
Cartbagenia, good	2 6 ..	4 2	2 0 ..	3 6
E. I. mossed	3 0 ..	8 0	2 6 ..	7 6
Ceylon, crown	4 0 ..	7 0	3 0 ..	6 0
red	1 6 ..	4 0	1 6 ..	4 0
Darjeeling, red fine	3 6 ..	4 0	3 0 ..	3 6
BUCHU LEAVES	0 2 ..	1 0	0 2 ..	0 11
CAMPHOR, China .. per cwt.	85 0 ..	0 0	82 6 ..	0 0
Japan ..	87 6 ..	0 0	85 0 ..	0 0
Refin. Eng. per lb.	1 3 ..	1 4	1 3 ..	1 4
CANTHARIDES, China ..	1 4 ..	0 0	1 4 ..	1 5
Russian ..	3 0 ..	3 4	3 0 ..	3 4
CHAMOMILE FLOWERS p. cwt.	25 0 ..	75 0	25 0 ..	75 0
CASTOREUM	20 0 ..	35 0	20 0 ..	35 0
DRAGON'S BLOOD, lb. p. cwt.	90 0 ..	330 0	90 0 ..	330 0
FRUITS AND SEEDS (see also Seeds and Sp. ces.)				
Anise, China Star per cwt.	85 0 ..	86 6	85 0 ..	86 6
Spanish, &c.	28 0 ..	37 0	28 0 ..	37 0
Beans, Tonquin .. per lb.	3 6 ..	6 9	3 6 ..	6 9
Cardamoms, Malabar				
good	6 3 ..	7 6	6 3 ..	8 6
inferior	3 0 ..	6 0	3 0 ..	6 0
Aleppy	2 6 ..	6 0	2 6 ..	6 0
Madras	2 6 ..	4 6	2 6 ..	4 6
Ceylon	3 0 ..	7 6	3 0 ..	7 6
Cassia Fistula	12 0 ..	15 0	12 0 ..	15 0
Cocculus Indicus ..	7 6 ..	8 6	7 6 ..	8 6
Colocynth, apple .. per lb.	1 2 ..	1 6	1 2 ..	1 6
Croton Seeds	65 0 ..	67 6	65 0 ..	67 6
Cubeb	110 0 ..	115 0	115 0 ..	117 6
Cummin	44 6 ..	47 6	40 0 ..	47 6
Fennigreek	10 0 ..	13 0	9 0 ..	13 0
Juniper Berries ..	10 3 ..	10 6	10 6 ..	11 0
Nux Vomica	6 0 ..	10 0	6 0 ..	9 9
Tamarinds, East India ..	5 6 ..	13 6	5 6 ..	13 0
West India ..	10 0 ..	13 0	10 0 ..	14 0
Vanilla, large per lb.	27 0 ..	31 0	20 0 ..	28 0
inferior ..	23 0 ..	26 6	14 0 ..	19 6
GINGER, Preserved ..	0 4 $\frac{1}{2}$..	0 7	0 4 $\frac{1}{2}$..	0 7
HONEY, Chili per cwt.	40 0 ..	55 0	40 0 ..	45 0
Jamaica ..	30 0 ..	47 0	30 0 ..	45 0
IPECACUANHA	5 0 ..	5 6	4 3 ..	5 9
ISINGLASS, Brazil ..	2 2 ..	5 1	2 2 ..	4 0
Tongue sort ..	2 9 ..	5 1	2 9 ..	5 0
East India ..	0 11 ..	5 1	0 11 ..	5 1
West India ..	3 0 ..	4 10	2 10 ..	4 9
Russ. long staple ..	7 0 ..	10 0	7 0 ..	10 0
inferior ..	0 0 ..	0 0	0 0 ..	0 0
Simovia ..	2 3 ..	2 6	2 3 ..	2 6
JALAP, good	0 10 ..	1 0	0 9 $\frac{1}{2}$..	0 11
infer. & stems ..	0 8 ..	0 9	0 8 ..	0 9
LEMON JUICE per degree	0 0 $\frac{1}{2}$..	0 1 $\frac{1}{2}$	0 0 $\frac{1}{2}$..	0 1 $\frac{1}{2}$
LIME JUICE	1 6 ..	1 8	1 6 ..	1 8
LIQUORICE, Spanish per cwt.	30 0 ..	36 0	30 0 ..	36 0
Liquorice Root ..	16 0 ..	23 0	20 0 ..	23 0
MANNA, flaky	4 0 ..	4 8	4 0 ..	4 8
MUSK, Pod	10 0 ..	56 0	10 0 ..	56 0
Grain	30 0 ..	60 0	30 0 ..	60 0
Yuan	32 0 ..	38 6	32 0 ..	38 6
OILS (see also separate list)				
Almond, expressed per lb.	1 2 ..	0 0	1 3 ..	0 0
Castor, 1st pale	0 3 $\frac{1}{2}$..	0 3 $\frac{1}{2}$	0 3 $\frac{1}{2}$..	0 3 $\frac{1}{2}$
second	0 3 $\frac{1}{2}$..	0 3 $\frac{1}{2}$	0 3 $\frac{1}{2}$..	0 3 $\frac{1}{2}$
Cod Liver	4 6 ..	5 6	5 0 ..	5 6

	Last Month			This Month				Last Month			This Month		
	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
Essential Oils:													
Almond.....per lb.	30	0	to	0	0		30	0	to	0	0		
Anise-seed, star..	9	0	..	0	0		9	0	..	0	0		
" German ..	10	9	..	0	0		10	9	..	0	0		
Bergamot	9	0	..	10	0		9	0	..	10	0		
Cajeput.....per bottle	3	0	..	3	4		3	0	..	3	4		
Caraway.....per lb.	2	6	..	6	6		2	6	..	6	6		
Cassia	4	0	..	4	3		4	0	..	4	3		
Cinnamon.....per oz.	7	6	..	7	6		7	6	..	7	6		
Cinnamon-leaf ..	0	2½	..	0	0		0	2½	..	0	0		
Citronelle	0	3½	..	0	0		0	3½	..	0	0		
Clove	7	0	..	7	9		7	0	..	7	9		
Lavender Exot...per lb.	1	6	..	7	6		1	6	..	7	6		
Mitcham ..	130	0	..	0	0		130	0	..	0	0		
Lemon.....	6	6	..	7	6		6	6	..	7	6		
Lemongrass.....per oz.	0	3	..	0	0		0	3	..	0	0		
Neroli	7	0	..	10	3		7	0	..	10	3		
Nutmeg	0	5½	..	0	0		0	5½	..	0	0		
Orange.....per lb.	7	3	..	11	3		7	3	..	11	3		
Otto of Roses.....per oz.	12	0	..	20	0		12	0	..	20	0		
Patchouli	2	0	..	3	10		2	0	..	3	10		
Peppermint:													
American.....per lb.	12	6	..	0	0		12	9	..	0	0		
(H. G. Hotchkiss) ..	13	3	..	0	0		13	3	..	0	0		
English	29	0	..	30	0		29	0	..	30	0		
German	13	9	..	0	0		13	9	..	0	0		
Rosemary	1	6	..	2	11		1	6	..	2	11		
Sassafras	2	3	..	0	0		2	3	..	0	0		
Spearmint	13	0	..	0	0		13	0	..	0	0		
Thyme.....	1	8	..	4	7		1	8	..	4	7		
Mace, expressed ..per oz.	2	0	..	3	0		2	0	..	3	0		
Opium, Turkey.....per lb.	18	0	..	19	0		15	0	..	16	0		
inferior	14	0	..	17	6		12	0	..	14	6		
Quassia (bitter wood) per ton	80	0	..	100	0		80	0	..	100	0		
Rhubarb, China, good and													
fine.....per lb.	3	0	..	4	3		3	4	..	4	5		
Mid. to fair.....	1	4	..	3	0		1	4	..	3	3		
Ordinary	0	9	..	1	3		0	10	..	1	3		
Roots—Calumba.....per cwt.													
China	23	0	..	24	0		30	0	..	40	0		
Chiretta	0	9	..	0	10		0	11	..	1	0		
Galangal.....per cwt.	18	0	..	22	0		18	0	..	22	0		
Gentian	18	0	..	18	6		18	0	..	19	0		
Orris	50	0	..	64	0		50	0	..	64	0		
Pellitory	55	0	..	65	0		55	0	..	65	0		
Pink.....per lb.	0	8	..	1	3		0	8	..	1	3		
Rhatany	0	2	..	0	4		0	2	..	0	4		
Seneka	2	7	..	2	9		2	6	..	2	9		
Snake	1	5	..	1	8		1	6	..	1	7		
Saffron, Valencia ..	45	0	..	46	0		50	0	..	52	0		
Salep.....per cwt.	120	0	..	130	0		120	0	..	130	0		
Sarsaparilla, Lima per lb.	0	5	..	0	6		0	5	..	0	6		
Guayaquil	1	3	..	1	4		1	5	..	1	6		
Honduras	1	5½	..	2	0		1	5½	..	2	0		
Jamaica	1	6	..	1	10		1	6	..	1	10		
Sassafras.....per cwt.	4	0	..	9	0		4	0	..	9	0		
Scammony, Virgin ..per lb.	85	0	..	44	0		35	0	..	44	0		
second & ordinary ..	10	0	..	30	0		10	0	..	30	0		
Senna, Bombay	0	1	..	0	3		0	1	..	0	3		
Tinnivelly	0	1½	..	1	6		0	1½	..	1	6		
Alexandria	0	0	..	0	0		0	0	..	0	0		
Spermaceti, refined ..	1	3	..	0	0		1	2	..	1	3		
American	1	0½	..	1	1		0	10½	..	0	11		
Squills	0	1	..	0	2		0	1	..	0	2		
GUMS.													
Ammoniac drop ..per cwt.	1	10	..	2	1		1	10	..	2	5		
Animi, fine washed ..	18	15	..	19	10		18	15	..	19	10		
sorts	10	10	..	16	10		10	10	..	16	10		
Arabic, pale picked ..	1	17	..	2	12½		1	17	..	2	12½		
sorts, md. to fin..	1	10	..	1	13		1	10	..	1	13½		
Turkey, pick. gd. to fin.	6	10	..	9	10		6	10	..	9	10		
second & inf.	3	0	..	6	0		3	0	..	6	0		
sorts	2	2½	..	2	15		2	2½	..	2	15		
Assafetida, cm. to fin	0	12	..	2	8		0	15	..	2	10		
Benjamin, 1st & 2nd ..	10	0	..	24	0		10	0	..	24	0		
COPAL, Manila.....per cwt.													
Angola, red.....	0	0	..	0	0		120	0	..	130	0		
Dammara, pale	90	0	..	96	0		90	0	..	96	0		
Euphorbium	38	0	..	60	0		38	0	..	60	0		
Galbanum	0	0	..	0	0		0	0	..	0	0		
Gamboge, pkd. pipe per cwt.	24	0	..	320	0		2	0	..	300	0		
Guaiacum	1	0	..	3	2		0	10	..	3	0		
Kino.....per cwt.	57	0	..	120	0		57	0	..	120	0		
Kowale, sorts	35	0	..	47	0		49	0	..	55	0		
selected	100	0	..	210	0		10	0	..	210	0		
Mastic, picked ..per lb.	2	6	..	4	0		2	6	..	4	0		
Myrrh, gd. & fine per cwt.	182	0	..	220	0		182	6	..	200	0		
ord. to fair.....	70	0	..	180	0		70	0	..	180	0		
Olbanum p. drop	55	0	..	10	0		55	0	..	60	0		
amber & ylw.	35	0	..	54	0		35	0	..	54	0		
Senegal	35	0	..	50	6		35	0	..	50	6		
Sandarac	89	0	..	115	0		90	0	..	120	0		
Shellac, Orange	157	6	..	165	0		160	0	..	165	0		
Liver	125	0	..	140	0		130	0	..	150	0		
Thus	0	0	..	0	0		0	0	..	0	0		
Thragacanth, leaf ..	240	0	..	440	0		240	0	..	440	0		
in sorts	40	0	..	210	0		40	0	..	210	0		
OILS.													
Seal, pale	30	0	..	31	0		30	0	..	0	0		
yellow to tinged ..	24	0	..	29	0		24	0	..	29	0		
brown	23	0	..	0	0		23	0	..	0	0		
Sperm.....	58	0	..	59	0		58	0	..	59	0		
Oils, continued:—													
Body	0	0	..	0	0		0	0	..	0	0		
God	32	0	..	0	0		31	0	..	32	0		
Whale, South Sea, pale ..	28	0	..	0	0		28	0	..	0	0		
yellow	27	0	..	0	0		27	0	..	27	1		
brown	22	0	..	0	0		23	0	..	0	0		
East India, Fish ..	0	0	..	0	0		0	0	..	0	0		
Oliver, Galipoli.....per ton	0	0	..	0	0		0	0	..	0	0		
Gioja.....	0	0	..	0	0		0	0	..	0	0		
Levant	36	0	..	0	0		36	10	..	37	0		
Mogador	34	0	..	0	0		35	0	..	36	0		
Spanish	37	0	..	0	0		37	10	..	38	0		
Sicily	37	0	..	0	0		38	0	..	0	6		
Oceanut, Cochlin	39	0	..	31	0		30	0	..	31	0		
Ceylon	28	5	..	0	0		27	5	..	28	0		
Mauritius	28	10	..	29	0		28	0	..	28	10		
GROUND NUT AND GINGELLY:													
Bombay	0	0	..	0	0		0	0	..	0	0		
Madras	0	0	..	0	0		0	0	..	0	0		
Palm, fine.....	31	0	..	0	0		31	10	..	31	0		
Linseed	26	0	..	26	7½		26	10	..	27	0		
Rapeseed, English, pale ..	29	15	..	0	0		31	10	..	31	10		
brown	27	15	..	0	0		28	10	..	23	12½		
Foreign, pale	0	0	..	0	0		0	0	..	0	0		
brown	0	0	..	0	0		0	0	..	0	0		
Cottonseed	25	0	..	25	5		26	0	..	26	10		
Lard	55	0	..	58	0		56	0	..	58	0		
Tallow	28	0	..	42	0		28	0	..	42	0		
TURPENTINE, American, cwt.													
Petroleum, refined, per gall.	0	7	..	0	7½		0	6½	..	0	0		
Spirit	0	7½	..	0	8½		0	9	..	0	10		



MEDICAL ACT AMENDMENT BILL.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Be good enough to insert the enclosed correspondence in your next issue, and oblige.

I am, dear sir, yours faithfully.

W. F. HAYDON, Secretary.

Chemists and Druggists' Trade Association of Great Britain,
23 Burlington Chambers, New Street,

Birmingham, June 27.

COPY.

Chemists and Druggists' Trade Association of Great Britain,
23 Burlington Chambers,

New Street, Birmingham,

May 27.

James Floyd, Esq.,

Corn Hill, Bury St. Edmunds.

DEAR SIR,—The Law and Parliamentary Committee of this Association have recently had under their consideration the Medical Act (1858) Amendment Bill, brought into the House of Commons by Mr. Harcastle and others.

Some little time since I received a communication from Mr. Gostling, of Stowmarket, intimating that you had a considerable amount of influence with Mr. Harcastle, having been Chairman of his Committee at the last election. My Committee therefore think that the Association cannot do better than lay their views before Mr. Harcastle, through your instrumentality, if you are willing to accept it.

Although they do not wish to oppose the Bill as a whole, they have, however, strong objections to certain portions of it.

With reference to sections 26 and 35, I am to state that, in the opinion of the Committee, the words "Dispensary," and "Medical Hall, or any other Medical or Surgical description" (appearing in section 26, sub-section 3), the whole of sub-section 6 of the same section, and section 35, so far as it proposes to repeal the 28th section of the 55th George III., chap. 194 (The Apothecaries Act, 1815), should be erased from the Bill, for the following reasons.

"Dispensary."—This word is frequently made use of by chemists, and a chemists' shop is essentially a place where physicians' prescriptions are dispensed.

"Medical Hall."—These words have from time immemorial been used by chemists on their labels and facia towards.

"Or any other Medical or Surgical Description."—This phrase is vague and unsatisfactory.

Section 26, Sub-Section 6.—This sub-section if passed into law would prevent chemists and druggists from supplying a remedy for the most simple and trivial complaints, except on the prescription of a medical man, and the words—"This section shall interfere with the rights, privileges, or titles conferred on persons by registration under the Pharmacy Act of 1852, or the Pharmacy Act of 1868," forming part of the same sub-section, in no way ameliorates the objection of the Committee to this sub-section, no rights or privileges as to "counter practice" being conferred on chemists by those Acts, but by the 28th section of the Apothecaries Act, 1815, previously referred to, chemists are especially permitted "to carry on their business in such a manner, and as fully and amply to all intents and purposes as the same business was used, exercised, or carried on by them before the passing of that Act." Evidence has been given in the High Court of Justice in the case of the Apothecaries' Company v. Shepperley, proving that prior to the passing of that Act it was the custom of chemists and druggists to prescribe and supply simple remedies for simple complaints, and, as is well known, this custom still continues.

Section 35.—This section proposes to repeal, among other Acts, that of the Apothecaries Act referred to in the last paragraph, and for the reasons there stated the chemists and druggists of this country would strenuously oppose by every means in their power the removal of the 28th section of that Act from the statute-book, unless the rights and privileges therein conferred upon them were as fully and completely secured to them in some other form.

I shall be very much obliged if you will communicate to me Mr. Harcastle's reply at your earliest convenience, as the Bill is down for second reading in the House of Commons on the 29th prox.; and in the event of Mr. Harcastle not being willing to amend the Bill in the manner proposed, I am instructed by the Law and Parliamentary Committee to take

immediate steps to ensure the Bill being blocked in its passage through the House.

I beg to enclose copy of the Bill, with the proposed amendments marked thereon in red ink.

I am, dear sir, yours faithfully.

(Signed) W. F. HAYDON, Secretary.

Bury St. Edmunds, May 28.

DEAR SIR,—I have sent your letter and copy on to Mr. Harcastle, and will let you have his reply.

Yours truly,

(Signed) J. FLOYD.

Mr. Haydon.

23 Burlington Chambers

New Street, Birmingham,

J. A. Harcastle, Esq., M.P.,

House of Commons.

June 3.

MEDICAL ACT, 1858, AMENDMENT BILL.

SIR,—Mr. Floyd, of Bury St. Edmunds, has forwarded to me your letter to him of the 30th ult. with reference to this Bill, and has requested me to communicate with you direct, using his name.

You state in your letter that, under the circumstances of a Royal Commission having been appointed on the subject of medical reform, your Bill will not be proceeded with, and that you suppose on the date for which the Bill stands for second reading you will move that it be discharged. You, however, add you have not yet communicated with the gentlemen who put the Bill into your hands.

I shall be very much obliged if you will be good enough to let me know as soon as it has been definitely decided what course it is intended to pursue in reference to the Bill.

I am, sir, your obedient servant,

(signed) W. F. HAYDON, Secretary.

Skipness, Argyllshire, June 6.

SIR,—Your letter has been forwarded here. As soon as I return to London next week I will communicate with the gentlemen who are interested in the Bill, after which you shall hear from me.

Yours truly,

(Signed) J. A. HARCASTLE.

23 Burlington Chambers,

New Street, Birmingham,

J. A. Harcastle, Esq.,

House of Commons.

June 22.

MEDICAL ACT, 1858, AMENDMENT BILL.

SIR,—In your communication to me of the 6th inst., you stated that on your return to London the following week you would communicate with the gentlemen who are interested in the Bill and again write to me.

As the Bill stands for second reading this day week, I shall deem it a favour if you will be good enough to let me know at once what course you intend to pursue with reference to it.

I am, sir, your obedient servant,

(Signed) W. F. HAYDON,
Secretary.

54 Queen's Terrace, S.W., June 23.

SIR,—I propose to move that the Medical Act Amendment Bill be discharged, as it is the opinion of those interested that no benefit will result from attempting to pass it.

I am, sir, yours truly,

W. F. Haydon, Esq.

(Signed) J. A. HARCASTLE.

43/191. X. was assistant with Y., who had a reputation for a certain compound medicine. Having left Y.'s employment and commenced business in the same large town, X. made and sold the same mixture, labelling it, of course, as his own. Y. made no objection, nor do we see that he was legally entitled to do so. Then Y. died, and his business and goodwill were sold to Z. Now, X. proposes to put a board outside his shop announcing "Y.'s Compound sold here." Z. says he has the sole right to do that. [The facts thus given are rather vague, but on them we are asked to give an opinion as to X. and Z.'s relative rights. We think much depends on the general form in which the mixture is asked for. If the public have come to ask for "Y.'s Compound" in the same way as they ask for Gregory's Powder, strictly proprietary rights can hardly be insisted upon. But this, we suppose, is not the case, and if Z. bought Y.'s business, and all pertaining to it, it is most likely that any Court would hold that he had the chief right to Y.'s name. Any way, it does not seem fair that another person who had never in any sense purchased such right should exercise the same to some extent, to the detriment of one who had.]

THE MELTING-POINT OF VASELINE.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR.—As there has been some discussion in the pharmaceutical journals respecting the advisability of having a higher melting-point in the petroleum product, "Gelatum Petrolei, Vaseline," we wish to point out why such a change would not be desirable.

1. A much higher standard is difficult to attain, it being dependent upon the incorporation with the concentrated petroleum of a quantity of the amorphous or natural ozokerite, or, secondly, in the use of a crude oil exceptionally rich in this peculiar substance, both of which methods are uncertain and unreliable.

2. Such a standard will be more difficult to manufacture and less certain in quality.

3. The use of a product of a much higher standard would be limited principally to cerates and ointments, and for many of these it would be objectionable, while for use in medicine and surgery the larger part of its curative effects would be lost. To be of full benefit, our long experience justifies the statement that the melting-point should not exceed the normal temperature of the body, but should rather be a few degrees below it, and for internal use this rule would seem to be imperative. We have adopted 95° Fahr. as a standard melting-point, and we find that in this form the jelly is applicable to all uses, its curative properties effectual, and its condition the most emollient. Wounds, buras, &c., can be treated from the outside without removing the bandages. In nasal, bronchial, and vaginal catarrh it will readily reach the seat of the disease, while the above-described substitute will be almost impossible of application, and, even if applied, would not penetrate to all parts of the diseased surface, nor become absorbed. The structural characters of both being amorphous and non-crystalline, the difference might be considered as one of degree in point of structure, but their physical properties and characters, as applicable to medicine and surgery, differ greatly, and, in our opinion, so do the results flowing from them.

4. We presume that the committee for the coming Pharmacopœia will recognise a product which has been found useful to the profession and is now generally known, used, and prescribed by it all over the world. It would, therefore, seem best that this product should be laid down as it has been and as it is now, and can be made and used, and not as it has not been made or used or approved. As known, the use of this product is very large, and extending rapidly, and is being used for external and internal purposes, as well as for ointments, everywhere. As suggested, its use will be at least problematical (excepting for some ointments), the results to be obtained uncertain, and its emollient and healing principles impaired.

5. The substance should be in such a condition and so described in the Pharmacopœia that the chemist of himself could make the desired prescription. This would be perfectly simple and easy from the present standard of 95° Fahr. and impossible from one of 20° higher, and, in our judgment, it would be better for the profession to leave the substance out of the Pharmacopœia altogether rather than to so enter it as to involve the whole question in confusion. To make ointments of a higher melting point, the chemist needs only to incorporate sufficient wax to reach the standard required, while if ointments of a lower melting point are required (and we consider them, with a few exceptions, every way superior), or if petroleum jelly of 95° Fahr. for external or internal use is wanted (and the majority will be wanted in this shape), the Pharmacopœia, if the higher standard should be adopted, will be a hindrance to the chemist instead of a help, and he will be the victim of a host of imitators offering worthless substitutes.

6. True gelatum petrolei of 95° Fahr. cannot be so imitated as to deceive an expert familiar with its use. Its jelly-like smoothness, perfect homogeneity, and amorphous structure cannot be attained by the imitations made of distillates and wax. If made of a much higher melting point, it could be more easily imitated, and worthless compounds would be sold in its stead. The article recognised by the Pharmacopœia should be a base from which all desired compounds could be made, and not an extreme branch of that base applicable to certain purposes only.

7. International uniformity is desirable, and should the substance be recognised in the Pharmacopœias of England, France, Germany, and the United States, which now appears quite probable, it should be in the known shape in which it has been studied by the profession, discussed in medical societies, and treated of in medical publications and papers in all languages, and not as a branch result of that substance which is entirely unknown.

For the above reason it is plain to us that the present accepted standard of vaseline is the best, and we may add that it has received the endorsement of the highest medical authorities in the world.

As to the manufacture of vaseline, our process has been discussed in various medical and scientific associations, and printed repeatedly in domestic and foreign publications. Vaseline is simply a carefully prepared, undistilled residuum of light gravity petroleum concentrated down in iron kettles by a high heat, and then repeatedly filtered through bone black until it is in the condition obtained in the market.

It cannot be made from distillates, as all heavy distillates contain paraffin, which is of a crystalline and not of an amorphous structure. Paraffin results from the condensation of the heavy distilled vapours of petroleum, but does not exist naturally in the crude oils of Pennsylvania. If vaseline

were distilled into vapour, and this vapour condensed, the substance obtained would be almost entirely changed by the operation into paraffin. Hence it follows, that coal-oils being necessarily distillates will not make vaseline at all, and this is why several imitations of vaseline, recently brought out in England and on the Continent, are dissimilar in substance and result.

Very respectfully yours,

CHESEBROUGH MANUFACTURING COMPANY.

41 Holborn Viaduct,
London, E.C.

190/44. A. B.—The Micrographic Dictionary is published by Van Voorst, 1 Paternoster Row, London, E.C.

191/12. W. W. C.—The following formula for **Sticky Fly-paper** or **Fly-glue** was given on page 184 of our Diary for 1879:—

Melt together 4 oz. of rosin with 1 oz. of linseed oil, and add 1 oz. of honey. Stir well and spread on paper, which must be previously steeped in alum solution to prevent the "glue" soaking through.

193/13. **Liquorice Root** is commonly kept by sticking the ends into damp sand. **Garlic** should be kept hung up in a brown-paper bag in a dry room.

193/25. A. D. has a quantity of fine Russian isinglass in a drawer, which has become dusty and dirty. Can anyone suggest a method of cleaning it? [Would elutriating it with benzoline or absolute alcohol answer?]

Pulveriser.—Can any reader recommend a small pulveriser, that will reduce to moderately fine powder, and mix, crystals such as sorbe sulph., capri sulph., &c., at the rate of about 1 cwt. an hour, and that can be worked by hand power.

"NIL SINE LABORE." (63/18.)

The Melbourne Exhibition.—The British Syphon Manufactory, 2 Greham Buildings, Basinghall Street, "are rather surprised that you should have omitted our firm in list of prize-takers at Melbourne Exhibition, considering that we obtained the highest award (first order of merit) for syphons and seltzogenes."

Jones's Mixture.—Last month a correspondent ("Kino"), asked some questions about trade-mark law, and suggested the term "Jones's Cure for Rheumatism" as an illustration. We presume this title was chosen at random, but Messrs. Wyleys & Co., of Coventry, ask us to state that they are the proprietors of the preparation usually sold as "Jones's Mixture," which they appear to suppose was alluded to.

L. & Co. ask if it is illegal to employ the word "patent" to designate an article which has not been actually patented. In reply we quote the following:—

By 5 & 6 Wm. 4, c. 83, sec. 7, anyone who improperly uses the name of a patentee, or designates his article as a patent, is liable to a penalty of 50*l* to be recovered in a quia tam action.

W. H. L.—**Pharmaceutical Arms.**—The 12th section of the Pharmacy Act, 1852, expressly forbids to all but pharmaceutical chemists, not only the use of the title pharmaceutical chemist or pharmacist, but also the use or display of any name, title, or sign implying registration under the Act as a pharmaceutical chemist. The use of the arms of the Pharmaceutical Society on stationery might, we suppose, be taken to imply membership of the Society.

192/57. **Glue.**—A B. wishes to know the brands and makers of a few reliable glues, principally for joiners' use, with prices, also of makers of lower qualities.

192/62. **Hector.**—**Luminous Paint.**—The specification of the patent is No. 4852, A.D., 1878, price 4*l*. Send the price and a penny for postage, with the number and year of the specification to "The Office for the Sale of Printed Specifications," 33 to 40 Cursitor Street, E.C., and you will receive it in due official course—probably not by return. You should remember that luminous paint is patented, and must not be made in more than the merest experimental quantities.

Hector would be glad to know of firms which supply cooked lentil-meat in bulk at fair market value.

E. L.—A formula for aqua chloroformi is given in the addendum to the British Pharmacopœia. It prescribes 1 fluid drachm of chloroform with 23 fluid ounces of distilled water, shaken together in a two-pint stoppered bottle until perfect solution is obtained.

We are requested to state that the vermin destroyer (Hunter's) for the sale of which Messrs. Lewis & Co., Manchester, were recently prosecuted, was not obtained by them of the proprietor, but through some other source unknown to him; and that no such house or dealer has ever been supplied with it by him either directly or indirectly.

FORMULÆ ASKED FOR.

Perry's purifying pills.—G. V. B. (191/54).

Scouring liquid (thick, soapy, and smelling of ammonia, used in Lincolnshire for cleaning cloth).—E. P. (195/64).

Poison for exterminating weasels, and the mode of using it.—Weasel.

Gourlay's mixture, a lotion for cuts.—A. M. J., 183/57.

THE EXCHANGE COLUMN.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I was pleased to read Mr. Bentley's letter in your journal of May 15, and even though his remarks may be vague, I do not doubt his good intention in publishing them.

In this month's issue I am amused at the innocent appeal "Is it I?" of "Analyst," care of Mr. Warnes," who says he has never received a complaint of his recipes being worthless. I cannot let this pass without contradiction. In April, 1881, I wrote to this said "Analyst" for formula for his leading article Foaming Dentifrice, which he still maintains is similar to Floriline. The preparation made from the recipe sent is nothing like Floriline in flavour, and I considered I was, as Mr. Bentley remarks, "beautifully taken in." I wrote to "Analyst," telling him how worthless his prescription was to me, as I already had a formula much better than his of my own manufacture, and also that I considered he ought to "turn the money, to which I received a reply saying he "never had complaints," but testimonials.

If "Analyst" cannot remember this single complaint, or wishes to deny the fact, I shall be pleased to search my file, and publish his letters, together with the formula for Foaming Dentifrice which is said to be like Floriline. Your readers may then judge for themselves.

Yours faithfully,

Hereford, June 27, 1881.

J. J. JACKSON.

STOKE'S LINIMENT.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—Stoke's liniment, St. John Long's liniment, and Grave's liniment are not linimentum terebinthinæ acetum, P.B., under another name, but are modifications of that liniment; or, rather, they are different liniments made with varying proportions of the same ingredients. It is clearly necessary that these different preparations should have names which will prevent any possible confusion of them with the official liniment. So that "Trade's" complaint is not well founded from a dispenser's point of view, though to a prescriber the minute differences may seem trivial and vexatious.

My chief object in writing is to point out that Dr. Martin's liniment is another preparation containing the same ingredients. The following is the formula:—

Vitellorum ovorum numero tres	
Olei terebinthinæ	3liiss.
Acidæ aceti fortis	3liiss.
Aquæ rosæ, ad	xvj. uncias

Misce secundum artem.

Yours, &c.

London.

SYM.

POST OFFICE AGITATION.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—As many branch Post Offices are held by chemists, would it be out of place to take the opinion of the majority, through your valuable paper, as to the pay? I think for the amount of work and responsibility there ought to be a higher scale of remuneration than at present. For instance, if Post Office receivers had 2½ per cent. for stamps, instead of 1 per cent., it would certainly be an advantage to the receiver; but, at all events, I think the pay is not sufficient, and ought to be rectified.

I am, sir, yours obediently,

P.O.O. (43/192.)

[The chemists who keep Post Offices must remember that there are also chemists who do not keep them, but who do pay taxes. Perhaps, as representing the latter class, we may ask for a rough idea of "the amount of work and responsibility," as well as of the pay. We should also like to know whether it is not the fact that there is considerable competition for vacant Post Offices, even at the present "insufficient" pay. Why should the Post Office pay for services on a different basis to other employers? Certainly their submission to the demands of the lucky telegraph clerks suggests that they are quite open to pressure.—Ed. C. & D.]

46/22. *Pix.*—*Pix Burgundica Facit.* is said to be made by melting together common resin and palm oil, water being stirred in to make the mixture opaque. *Tereb. venet. facit.* is an artificial mixture of common resin and oil of turpentine. Melt a pound of resin in a skillet, remove from the fire, and stir in 5 oz. of turpentine oil.

Patent Medicine Stamp Regulations.—"Jones' powders for indigestion, prepared only by John Smith, Chemist, Anywhere," would require a stamp on more than one ground. Firstly, the words "Jones' powder" imply that the composition is a secret; secondly, the words "prepared only" claim for John Smith a proprietary right which he must pay for. "Indigestion powders, John Smith, &c.," would probably be a safe label, but your best plan would be to submit to the Inland Revenue Department, Somerset House, a copy of the label you propose to use, and ask them if they consider that it requires a stamp.

Poison Register—Must it be shown on Demand?—In September, 1878, this point was fully argued at the Spalding Petty Sessions.

The magistrates then decided that they had no power to compel a chemist to produce his register. Such being the case, it is clear that no chemist need show it to a police constable either with or without a magistrate's authority. The register is a private document belonging to the chemist. Nothing in the Pharmacy Act declares it to be a public document, and, until it is so declared, the public, whether magistrates or police constables, have no power over it. Still, the decision of the Spalding magistrates is not of unimpeachable authority. Another bench of magistrates might take a different view of the case, and, though it might be possible to get their decision reversed, the process would be costly.

PHARMACY ACT OF NEW ZEALAND.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—I wrote a day or two since to the Pharmaceutical Society's secretary asking for information as to the state of pharmacy in New Zealand, and also whether the Society's certificates were of any service there.

In reply I was informed that no information could be given on the subjects referred to.

On speaking to others in the trade, I find that they have received the same answer to similar inquiries.

Considering that courtesy costs nothing, such ineivility could scarcely be expected or commended at head-quarters.

I am, sir, yours respectfully,

VERA. (26/192.)

[Full particulars of the Pharmacy Act of New Zealand were given in THE CHEMIST AND DRUGGIST, November, 1880. The certificates of the Minor or Major examinations of the Pharmaceutical Society of Great Britain confer the right of registration in that Colony. We think the officials of the Pharmaceutical Society here ought to be aware of the extent of the advantages conferred by their diplomas.—Ed. C. & D.]

DOBELL'S SEDIMENT COLLECTOR.

TO THE EDITOR OF "THE CHEMIST AND DRUGGIST."

SIR,—In looking through your June number to-night I have come upon what you call "Maw's glass apparatus for collecting precipitates." I am surprised to find this described as "Maw's" instead of "Dr. Dobell's." It is my invention, and Maw simply makes it and takes the profits. The woodcut you give appeared in the *Brit. Med. Journal* as my invention when it first came out. I shall be obliged if you will make a note of this mistake in your next number. "Dr. Dobell's Sediment Collector" is the proper name.

Yours truly,

H. W. DOBELL.

84 Harley Street, Cavendish Square, W., July 6.

[In self-justification, we may say that the invention was catalogued as Maw's, probably on the authority of the exhibitors, Messrs. Young & Postaus.]

191/54. *G. V. B.*—*Perry's Balm of Syriacum.*—The following is the formula according to Cooley:—

Gin	1 pint
Moist sugar	½ lb.
Water	4 oz.

Disolve the sugar in the water, mix in the gin, then add

Paregoric (tinct. camph. co. P.L., 1836)	1 oz.
Tincture of tolu.	½ oz.
Tincture of cantharides	q.s. [sic]
Aniseed and spearmint oils	a few drops

Agitate well together, and the next day filter or decant the clear portion.

185/99. **Black Stain for Terracotta.**—*D. B.* will find "Ivory black," as sold in metallic tubes for oil-painting by artists' colourmen answer his purpose. One coat gives a smooth dead black, which will stand washing, and which may be varnished with finest hard copal varnish if a brilliant surface is desired.—W. L. H.

191/57. *J. A. W.*—*Tinctura Ergotæ Ammoniata.*—The subjoined is Mr. Gore's formula:—

Bruised ergot	4 oz.
Aromatic spirit of ammonia	½ pint.

Macerate for a month, express and filter. Dose, 30 drops every 10 minutes.

Glycerinum Bismuthi Subnitratiss—Full particulars are given in our volume for 1879, p. 516.

TAKING IT LITERALLY.—It is not always good policy to take some things as read. In a hairdresser's shop at the East-end of London, a bill was exhibited in the window recommending a certain patent medicine, with the very dubious heading—"Try one box—no other medicine will ever be taken." In a certain apothecary's shop the following printed notice used to be displayed—"All sorts of dying stuffs sold here."

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Asthma
Bronchitis
Paralysis
Epilepsy
Rheumatism
Gout
Constipation

Local Debility
General Debility
Female Complaints
Mental and
Physical Weakness
Functional Disorders
&c., &c.

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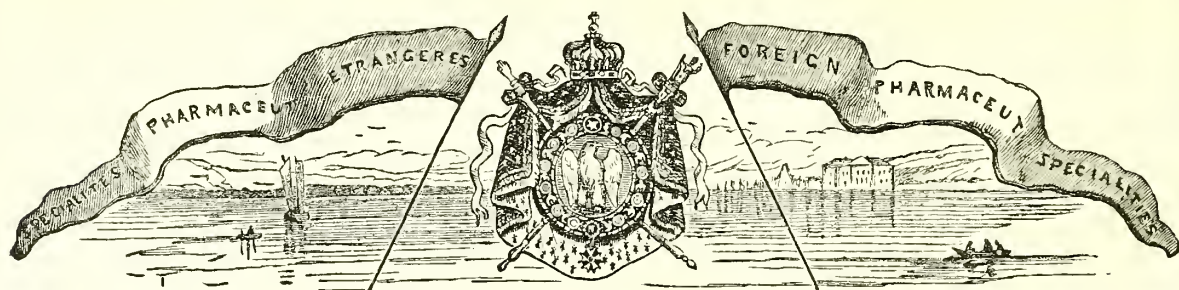
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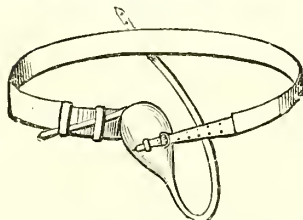
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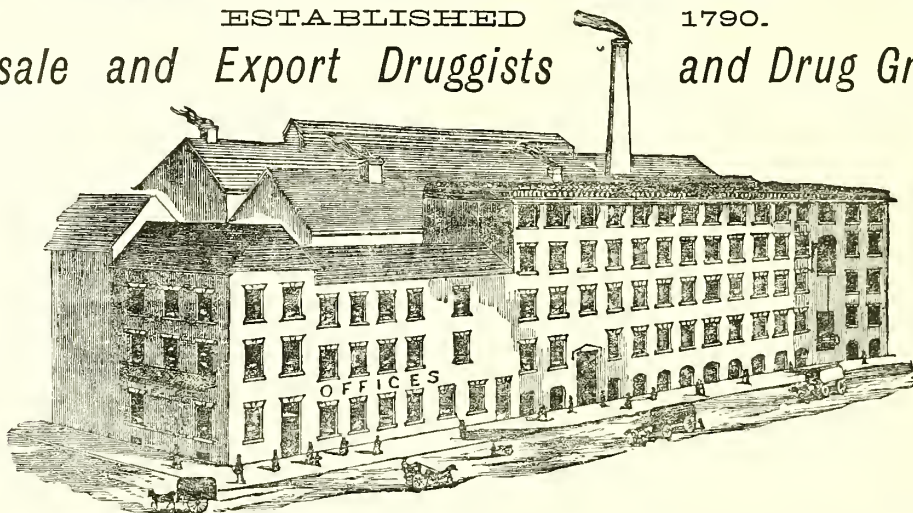
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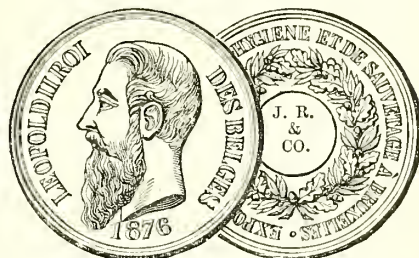
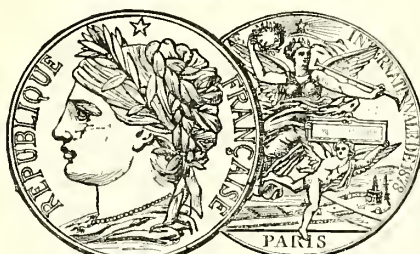
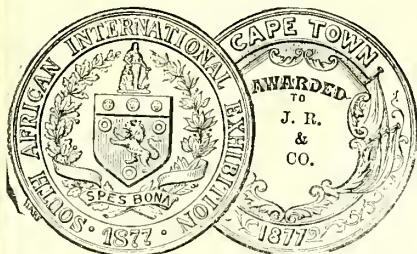
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DEAR SIRS,—Having for many years past used your *Pearl-Coated Pills* in our Dispensaries, both from formulae supplied by us and from numerous others contained in your list, and which we now regularly adopt, we have great pleasure in testifying to their undeviating efficacy, as also to the satisfaction they have given to the leading medical gentlemen of the city, for whom we dispense, and who have every confidence in them. We have found from our own experience that they are readily soluble in the stomach, and that when Quinine, Morphia, Opium, &c., are given, the result has always been in accordance with that expected.

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I am, dear Sirs, yours faithfully,

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IN THE NURSERY it is invaluable, as children are fond of it and take it eagerly. Immediately it is taken coughing ceases, restlessness is gone, and refreshing sleep ensues. No lady who has once tried it would ever afterwards be without it.

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IT HAS A MOST PLEASANT TASTE.

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Mr. HORROX, Chemist, Mildenhall, writes to say:—"One of my customers says your Balsam is worth sixpence a drop."

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Discovered to be a general Anæsthetic by
Dr. RICHARDSON in 1867.
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COMPOUND ANÆSTHETIC ETHER.
For producing Local Anæsthesia.
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For promoting the Healing of Wounds by the first intention.
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Containing pure Vegetable Ivory
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AGREEABLE
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APPEARANCE,
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EFFECT.

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Subject to the usual discount.

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ACID, CARBOLIC or Phenol Absolut.	Fine white hard crystals	Free from Cresylic Acid. Watery solution will not show greasy spots floating on top.
ACID, GALLIC	Almost white needles	Freely and entirely soluble in alcohol or water.
" PYROGALLIC	Bi-sublimed, white, bulky	Ditto ditto ditto.
" SALICYLIC (Kolbe's)	White, powder, crystallised, and dialysed	Dissolves colourless in water or alcohol; purest for medicine.
" TANNIC	Lightest crystals	Dissolves almost colourless in water, alcohol, and ether.
" "	Powder and granulated	Dissolves freely in water, alcohol, and ether.
CELLOIDINE (Patent)	Gelatine plates	Purest Pyroxylin; inexplusive.
CHLORAL HYDRATE	White cake and crystal	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age.
CHLOROFORM (ex Liebreich's Chloral)	Schering's original label	Free from foreign chlorides. Will leave no odour on evaporation.
CROTON CHLORAL	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE	Resublimed, fine scales	Purest.
IODOFORM	Dry yellow scales	Purest, by medical reports.
POTASS, BROMIDE	Fine white dry regular crystals	Perfectly free from iodide, and the most free from chloride.
" CAUSTIC	Lump and stick, white	Commercially pure, and pure by alcohol.
" CYANIDE	Ditto ditto	30%, 45%, 60%, and 95%.
" PERMANGANATE	Large and small crystals	Chemically pure.
" IODIDE	Fine white dry regular crystals	Apply Barytic and other tests. This will never change colour.
SILVER, NITRATE	Fine large crystals	63 to 63½% pure silver.
SODA, CAUSTIC	Lump and stick, white	Chemically pure, and pure by alcohol.
SODA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

H. FINZELBERG, of Andernach-on-Rhine,

MANUFACTURER OF

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed)	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

GUSTAV RHODIUS, of Burg Brohl.

MANUFACTURER OF

POTASS, BICARBONATE ...	White powder and crystals	Dissolves bright in water.
SODA, BICARBONATE ...	Purest white powder, taste neutral, speciality for Soda powder	See tests P.B.
SODA, CARB. (purest) ...	Dry, for pure Soda Salts	Indifferent to Nitrate of Silver and Chloride of Barium.

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THE ORIGINAL AND ONLY TRUE.

Discovered and Invented by **RICHARD FREEMAN** in 1844.

It is one of those preparations so well known as having something in its composition which defies the imitator, and makes it an invaluable remedy. No other remedy known can be exhibited with so much confidence as a **SEDATIVE**, an **ANTI-SPASMODIC**, an **ASTRINGENT**, an **ANODYNE**, or **DIAPHORETIC**.

In its composition and effect it bears no resemblance to any of the many formulæ published, but has curative and chemical properties peculiarly its own, nor is there any analytical test for it. It has been found by the Profession and large numbers of the public to succeed after all imitations had failed, and maintains its unaltered position as the only reliable **CHLORODYNE**.

TESTIMONIALS.

Mr. R. FREEMAN,

Dear Sir,—It is with much pleasure that I am able to state that your Chlorodyne has been of special service to me in alleviating the wearisome spasms of Asthma, which is here existent in an aggravated form. Many of my patients now come and beg me to give them that medicine which always relieves them, and which I need hardly say is your Chlorodyne.

HEAD-QUARTER STAFF, CABUL, May 31st, 1880.

Yours faithfully,

CHARLES W. OWEN, L.R.C.P., Lon., M.R.C.S., Eng.
The Divisional Head Quarter Staff and Civil Surgeon, Cabul.

THE "TIMES," AUGUST 13th, 1877.

From our own Correspondent with the Russian Army.

OKOUM, July 25th, 1877.

The want of sanitary arrangements in the Russian camp was dreadful, and had we remained there a few weeks longer dysentery and typhoid fever would have played more havoc in our ranks than the bombs of the Turks. I myself acquired an unenviable reputation as a doctor, owing to my being provided with a small bottle of **CHLORODYNE**, with which I effected miraculous cures.

IMPORTANT CAUTION.—Four Chancery Suits terminated in favour of **FREEMAN'S ORIGINAL CHLORODYNE** and against Collis Browne and Davenport. Lord Chancellor Selbourne, Lord Justice James, and Lord Justice Mellish condemned their proceedings, and decreed them to pay all costs. Reports of the suits in "Times," January 12 and July 13, 1864, and April 29 and July 24, 1873, and "British Medical Journal," May 3, 1873.

Sold in Bottles, 1s. 1½d.; 2 oz., 2s. 9d.; 4 oz., 4s. 6d.; 8 oz., 9s.; half pints, 11s.; and pints, 20s. each; and for dispensing only in bottles, fl. 8 oz. 8s., and fl. 20 oz. 18s. (in weight one pound and a half). A liberal discount allowed. Special quotations given for quantities for Hospitals, Workhouses, Infirmarys, and other Public Medical Institutions. Full directions in various languages.

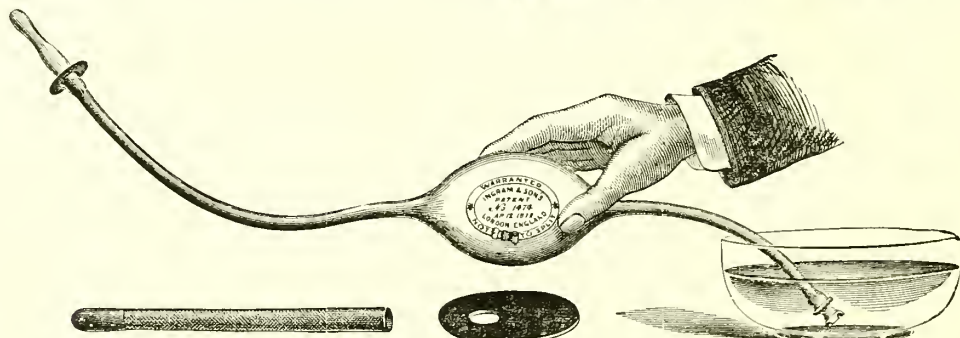
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By Royal Letters Patent.

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WARRANTED NOT TO SPLIT.

The following are the advantages we claim for our invention:—

- 1st.—A complete Enema and Syringe Apparatus, without any metallic connections or wire fastenings whatever, thereby avoiding the possibility of leakage.
- 2nd.—Specially prepared to resist the heat in tropical countries.
- 3rd.—A perfect apparatus: will not split, become hard, or sticky.

Patented in America, No. 212,939, March 4th, 1879, and in France, No. 126,909, October 11th, 1878.

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CHEMISTS, DRUGGISTS, SURGICAL INSTRUMENT MAKERS and DRUGGISTS' SUNDRIESMEN.

BULLOCK'S PEPSINA PORCI. DOSE— 2 to 4 grains.

Dr. Beale's Process. In Small Bottles for Retail and in Bulk.

BULLOCK'S ACID GLYCERINE OF PEPSINE, DOSE— 3 j to 3ij.

May be prescribed with most substances compatible with Acids. In 4 oz., 8 oz., and 16 oz. Bottles, and in Bulk.

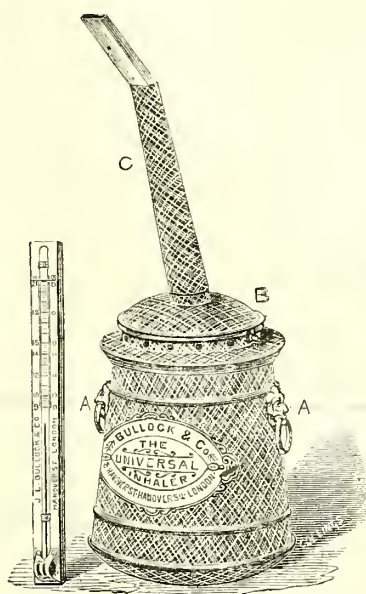
Messrs. BULLOCK & CO. beg to direct attention to a paper on "Medicinal Pepsine and Artificial Digestion," in the *Practitioner* for March, 1880, by G. F. DOWDESWELL, Esq., B.A. (Cantab), F.C.S., F.L.S., &c. Upwards of 200 experiments made by the Author proved the great superiority of BULLOCK'S PEPSINA PORCI and ACID GLYCERINE OF PEPSINE over every other Pepsine or Preparation of Pepsine, English, French, German, or American, and confirmed the equally favourable reports of Dr. PAVY (1863), Professor TUSON (1870), and the late Professor GARROD (1878), as to the pre-eminent digestive value of Bullock's Pepsina Porci.

PEPSINE WINE, Bottles, 3/, 5/6, and 10/6.	PEPSINE PILLS, Containing 2, 3, or 4 grains.	PEPSINE LOZENGES, Boxes, 3/ and 5/6.	PEPSINE AND CHARCOAL LOZENGES, Boxes, 2/6 and 4/6.
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And of all Wholesale Houses.

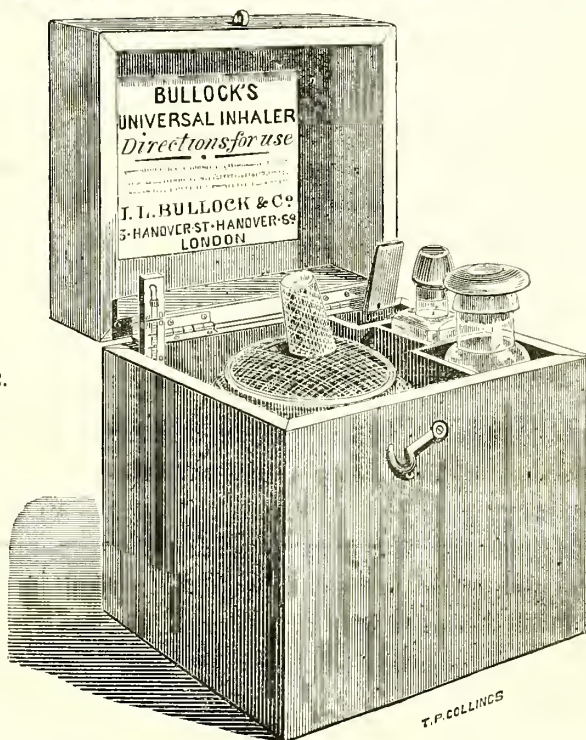
THE UNIVERSAL INHALER.

Fig. 1.



Sketch of Inhaler and Thermometer.

Fig. 2.



Sketch of Case containing Inhaler, Thermometer, and Nostril Dilator, fitted with Divisions for Bottles of Inhalation and Lozenges.

DESCRIPTION.

The Inhaler consists of three parts, A, B, and C.

A is an open vase perforated at the top, which contains the hot water.

B is a lid resembling an inverted tumbler, and perforated at the bottom.

C is the mouthpiece, which for use is fixed on the lid B.

In the act of inhalation, air enters through the series of holes seen at the top, and, passing through a corresponding series of holes placed half-an-inch below the surface of the hot liquid, escapes into the air chamber, whence, fully impregnated with the medicament, it is drawn through the tube C into the mouth or nostril.

The UNIVERSAL INHALER effectually combines the following Advantages:—

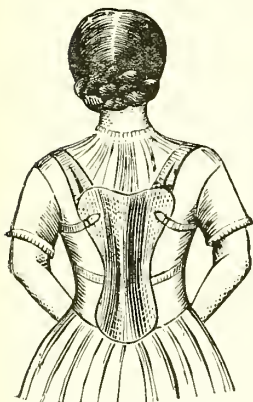
It holds up to the black line nearly $1\frac{1}{2}$ pints of water, whereby the rapid lowering of temperature is greatly diminished. (When used in the case, which is lined with thick baize, the loss of heat is reduced to a minimum.) Easy inhalation, in consequence of the air having to pass through a small column of water. By means of handles, the Inhaler, when hot, may be carried about without inconvenience. Being made of tin, it is not liable to break or get out of order, and, as the tube and mouthpiece pack inside, it is very portable, occupying but a small space.

J. L. BULLOCK & CO., 3 Hanover Street, Hanover Square, LONDON.

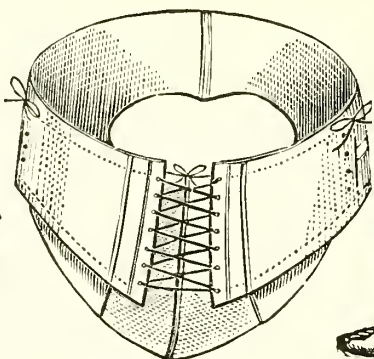
Retail Prices:—Inhaler and Thermometer, as Fig. 1, 7/6; do., do., in Case complete, as Fig. 2, 12/6.

May be obtained of Messrs. MAW, SON & THOMPSON, Aldersgate Street, London, E.C.

HAYWOOD'S SURGICAL APPLIANCES.



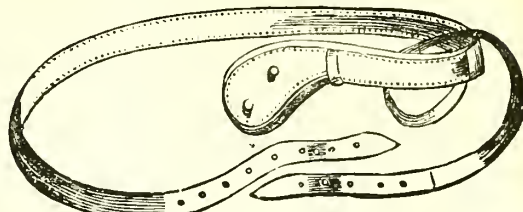
SPINAL COLUMN SUPPORT
(REGISTERED).



PERFECTION BELT
(REGISTERED).

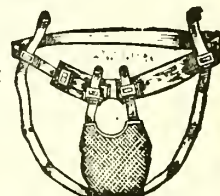


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PATENT TRUSS MANUFACTURERS.

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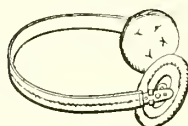


FIG. 1. Patent Single.

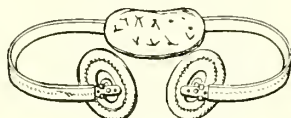


FIG. 2. Patent Double.

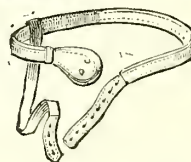


FIG. 3. Common Single.

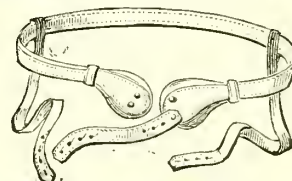


FIG. 4. Common Double.

NETT PRICES, 1880.

Patent Self-Adjusting Trusses, Basil and Chamois, per doz (Fig. 1), single				Common Circular Trusses, Basil and Chamois ... per doz. (Fig. 3), single			
Patent	Self-Adjusting	Trusses, Basil and Chamois	...	Common	Circular	Trusses, Basil and Chamois	...
Ditto	ditto	Basil and Molekin	...	Ditto	ditto	Basil and Molekin	...
Ditto	ditto	Roan and Skiver, Silk Sewn	...	Ditto	ditto	Basil and Chamois	...
Ditto	ditto	Basil and Chamois	...	Ditto	ditto	Basil and Molekin	...
Ditto	ditto	Basil and Molekin	...	Ditto	ditto	Roan and Skiver, Silk Sewn	...
Ditto	ditto	Roan and Skiver, Silk Sewn	...	Ditto	ditto	...	...

N.B.—Customers are invited to order direct from S. O. & Co., or to advise their Agents to do so, as the GENUINE article cannot be obtained elsewhere, and none are of their make unless stamped with Registered Trade Mark on Springs and Plates.

The *Lancet* says:—"This instrument is very complete. It is portable, it is cheap, and it acts promptly."

Medical Examiner says:—"It is not, perhaps, going too far to say that such a contrivance as Allen & Son's Portable Turkish Bath should find a place in every well-regulated household."

Medical Times and Gazette says:—"Deserves to be much more widely known and used than it seems to be at present."

Sanitary Record says:—"Will be found a luxury, as well as a valuable remedial resource."

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Recommended by The *Lancet*, Queen, Sanitary Record, &c., &c.

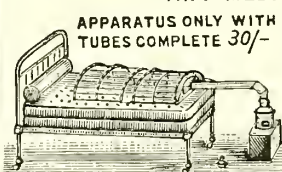
For use over Fire, 7/6; with Stand and Lamp, 15/.

INHALERS, 5/ and 6/ each, &c.

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J. ALLEN & SON'S PORTABLE TURKISH BATH.

CAN BE USED FOR HOT AIR ONLY, HOT AIR AND VAPOUR COMBINED, OR FOR A MERCURIAL OR ANY MEDICATED BATH.



APPARATUS ONLY WITH
TUBES COMPLETE 30/-

FOR
RHEUMATISM,
GOUT, ECKEMA,
LUMBAGO,
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SKIN, LIVER,
AND KIDNEY
AFFECTIONS.



APPARATUS FOR BED IN BOX WITH
PAIR OF WICKER FRAMES 45s

FULL PARTICULARS WITH MEDICAL
AND PRESS OPINIONS POST FREE.

APPARATUS FOR USE UNDER
CHAIR, WITH BEST CLOAK

TINNED IRON SUPPORTS
IN BOX 50s

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The *British Medical Journal* says:—"Possesses in an eminent degree the very desirable qualities of efficiency, portability, and cheapness, thus meeting every requirement."

Medical Press says:—"Medical men should keep among their stock of instruments this useful apparatus."

London Medical Record says:—"The Turkish Hot-Air and Vapour Bath, introduced into use by Messrs. Allen, is really invaluable for safety, convenience, and simplicity."

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**THE INFANTS' & INVALIDS'
FOOD WARMER.**

Ventilating Croup Kettles,
Steam Throat Sprays, &c., &c.

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**THE CONDY'S FLUID CO.,
7 Falcon Street, London.**

BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR
FIRM AND GENUINE PRIZE MEDAL LABELS, WITH
FICTITIOUS ADDRESSES.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

From SYMES & Co., Pharmaceutical Chemists, Medical Hall, Simla,
January 5, 1880.

To J. T. DAVENPORT, Esq., 33 Great Russell Street, Bloomsbury, London.

DEAR SIR,—Have the goodness to furnish us with your best quotations for Dr. J. Collis Browne's Chlorodyne, as, being large buyers, we would much prefer doing business with you direct than through the wholesale houses. We embrace this opportunity of congratulating you upon the wide-spread reputation this justly-esteemed medicine has earned for itself, not only in Hindostan, but all over the East. As a remedy of general utility, we much question whether a better is imported into the country, and we shall be glad to hear of its finding a place in every Anglo-Indian home. The other brands, we are happy to say, are now relegated to the native bazaars, and, judging from their sale, we fancy their sojourn there will be but evanescent. We could multiply instances *ad infinitum* of the extraordinary efficacy of Dr. Collis Browne's Chlorodyne in Diarrhoea and Dysentery, Spasms, Cramps, Neuralgia, the Vomiting of Pregnancy, and as a general sedative, that have occurred under our personal observation during many years. In Choleraic Diarrhoea, and even in the more terrible forms of Cholera itself, we have witnessed its surprisingly controlling power. We have never used any other form of this medicine than Collis Browne's, from a firm conviction that it is decidedly the best, and also from a sense of duty we owe to the profession and the public, as we are of opinion that the substitution of any other than Collis Browne's is a deliberate breach of faith on the part of the chemist to prescriber and patient alike.

We are, Sir, faithfully yours,

SYMES & Co.,
Members of the Pharm. Society of Great Britain,
His Excellency the Viceroy's Chemists.

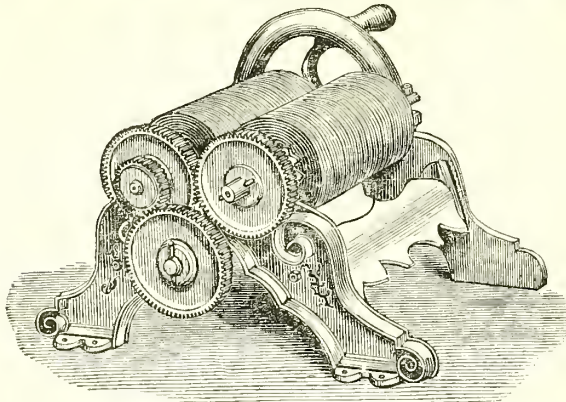
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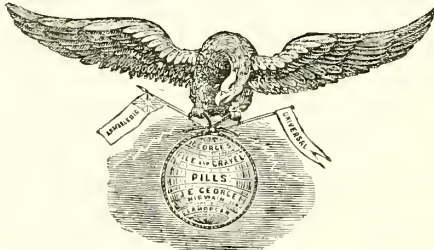
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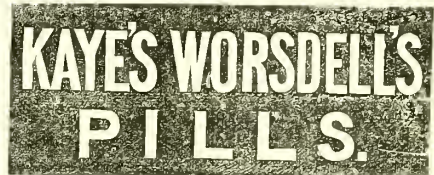
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Size.	Height.	N.M.	W.M.	N.M.	W.M.			Size.	Height.	N.M.	W.M.	N.M.	W.M.
16 ounce	8 inches	17/	19/	20/	22/	per dozen.		32 ounce	10½ inches	20/	23/	22/	26/6 per dozen.
20 "	9 "	18/	20/6	21/	23/	"		42 "	11 "	24/	26/6	30/	"

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Ady, Dr. J. C., Rangoon.
 Beckwith, H. B., Grenada.
 Blair, John, Cork.
 Bradford, Dr., Carlisle.
 Bray, W., Pollokshields.
 Brevis, John, West Hartlepool.
 Brocq, P. De Le, Jersey.
 Brunton, W. W., South Kensington, London.
 Campbell, Dr., Oban.
 Carruthers & Allan, Dumfries.
 Charlesworth & Co., Manchester.
 Cullen & Co., South Norwood, London.
 Cummings Bros., Dundee.

Donald, Dr., Paisley.
 Edwards, G., Stockport Road, Manchester.
 Forwell, H., Helmsburghe.
 Fraser, John, Helmsdale.
 Henry, J. P., Belfast.
 Hume, R., Glasgow.
 Irvine, Dr., Piddichry.
 Kinnimount, A., Glasgow.
 Leiper, Dr., Douglas.
 Lonsdale, A. W., Rangoon, Burmah.
 Macfarlan, A. Y., Edinburgh.
 Mackie, Keith, Paisley.
 MacVea, A., Whithorn.

Mason, W. D., Grimsby.
 Maston, G., Hartlepool.
 Mungall, Dr., Glasgow.
 McCaul, J. & G., Londonderry.
 McJannet, Dr., Lennoxtown.
 McKirdy, J., Rothessy.
 MRae, Alexander, Edinburgh.
 Noble, A., Galashiels.
 New Medical Hall, Campbeltown.
 Pattison, H., Colcham, Shrewsbury.
 Pettigrew, J. W., Lenzie.
 Quiray, W. D., Belfast.
 Reid, Dr., Aberfeldy.

Rand, E., Wagga-Wagga, New South Wales.
 Senior, Harold, Norwood Lane, London, S.E.
 Sibthorpe, S., Wolverhampton.
 Smith, Albert, Ilfricombe.
 Tansie, H., Londonderry.
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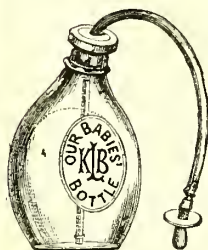
1 dr.	2 dr.	$\frac{1}{2}$	1	2	3	4	6	8	10	12	16	20	32	40	oz.
12/-	13/6	11/6	12/6	13/6	15/6	17/-	20/-	21/-	23/-	25/-	28/-	31/-	38/-	42/-	per dozen.

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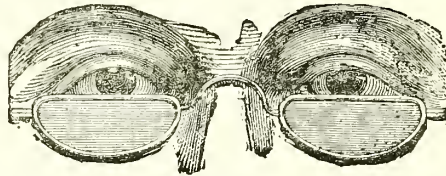
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When Chemists order my Disinfecting Fluid they should see that they get the proper article.

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Copaiba Capsules, No. 0.....	7/	1/6
" " No. 1.....	6/6	1/3
" " No. 2.....	6/	1/
Copaiba, Alum and Cubebs	7/	2/
Compound Ferruginous	7/	2/
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And sold at 1s 1½d., 2s. 9d., 4s. 6d., 11s., 22s., and 32s. each Box or Pot.

Chemists and Druggists selling "Holloway's Pills and Ointment" can, on application to the above address, or to the Wholesale House with whom they deal, be supplied free of charge with Handbills and Posters with their name and address printed at foot.

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ADVERTISEMENT INDEX,

Pages 43 and 44.

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chap. 91).



Enacted by the "Queen's
Most Excellent Majesty,"
20th August, 1875.

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DR. LALOR'S PHOSPHODYNE

Discovered and so named A.D. 1862,
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To Residents in India, China, and the Colonies, it will
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Restorative.

DR. LALOR'S PHOSPHODYNE

Is a Pure Solution of Phosphorus, pleasant in flavour and appearance, being a perfectly Bright Liquor, combined with Vegetable Alkaloids, possessing marvellous Curative Properties, the Wonder of Modern Chemistry, free from all Dangerously Active Drugs; innocent in its action, and pronounced by the Highest Medical Authority to be unequalled for its power in replenishing and elaborating the Vitality of the Body; by its supplying all the essential constituents of the Blood, Brain, and Nerve Substance; and for developing all the Powers and Functions of the System to the highest degree, thereby checking all Wasting of the Vital Fluid, and the more Exhausting Wear and Tear of Life resulting from Over-taxed Energies of Body or Mind, maintaining that Buoyant Energy of the Brain, Nervous, and Muscular Systems, which renders the Mind Cheerful, Happy, Brilliant, and Energetic.

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Surpasses all the known therapeutic agents of the present age, for the Speedy and Permanent Cure of all Derangements of the Nervous and Blood Systems.

Nervous Prostrations, General Debility, Mental and Physical Depression, Incapacity for Study or Business, Noises in the Head and Ears, Loss of Energy and Appetite, Nervous Debility in all its Stages, Softening of the Brain, Paralysis, Pains in the Back, Affections of the Kidneys, Urinary Deposits, &c., Asthma, Scrofula, and Skin Diseases, Wasting or Withering of the Muscles, Impure and Impoverished Blood, Premature Decline, and all morbid conditions of the system dependent upon the deficiency of the Vital Forces arising from whatever cause.

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The Phosphoric Treatment of Disease, with Cures, post free from

DR. R. D. LALOR, Bay House,
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The Sole Proprietor and Originator of Phosphodyne.

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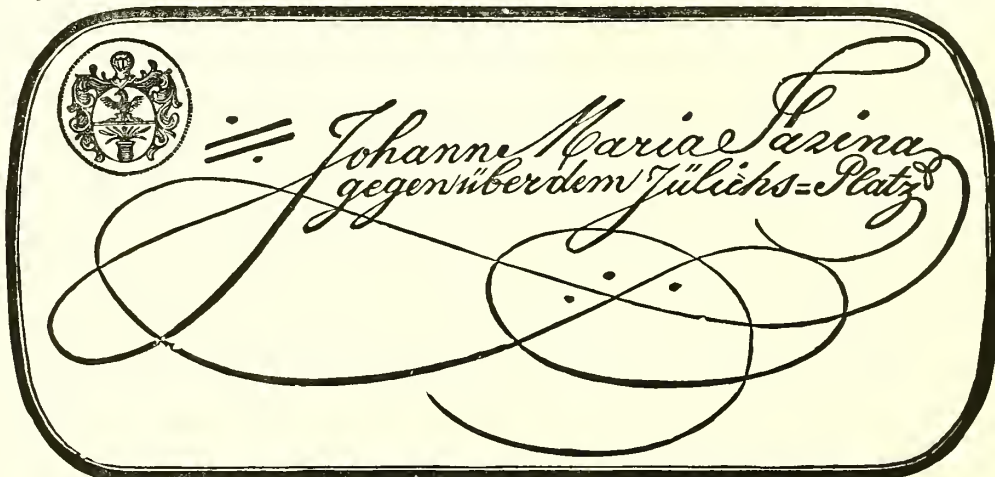
By appointment, Sole Purveyor to Her Most Gracious Majesty Victoria, Queen of Great Britain & Ireland; Their Royal Highnesses the Prince and Princess of Wales; William, King of Prussia;



Albert II., King of Saxony; Alexander II., Emperor of Russia; Francis Joseph, Emperor of Austria; Lewis, King of Portugal; H.R.H. Frederick William, Crown Prince of Prussia.

In consequence of increasing inquiries from the Colonies for my Eau de Cologne, the only genuine, I beg to submit my Price Current.

At the same time I beg to call special attention to the following facsimile of my Trade Mark, for the protection of which I have instituted thirteen suits in the High Court of Chancery, all of which have been decided in my favour.



All similar Labels being more or less imitations of the same, I shall proceed as before against all persons selling or exposing for sale any such imitations.

I only prepare one quality of Eau de Cologne. This quality never varies in the slightest degree, and there has not been the smallest change in the manufacture since the year 1709, when it was invented by my ancestor.

Orders equal to at least 12 dozen short bottles will be promptly executed at 12s. 6d. per dozen, against my bill drawn at three months from the date of invoice, delivered free on board the export ship, at Rotterdam, Antwerp, Hamburg, or Bremen, no charge being made for the case and packing, but insurance charged extra. 7½ per cent. discount is allowed for orders equal to at least 100 dozen, but on no smaller quantities.

I may add that, as I do not draw on the Colonies, all Orders must be accompanied by a credit on some London House, or permission to draw on same at three months.

The Goods can also be shipped in transit through London at a very small additional expense, full particulars of which may be obtained of my Sole Agents for Great Britain and Ireland:—

MESSRS. J. & R. McCRACKEN,

No. 38 Queen Street, Cannon Street, London, E.C.

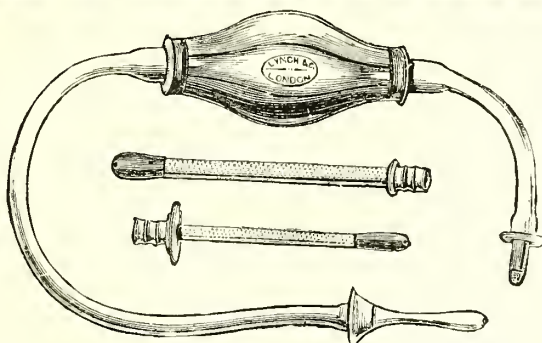
The following are the sizes of my bottles:—

No. 1. Long Green Flasks	...	...	...	...	...	12 bottles	} to one dozen.
„ 2. Short White Bottles	...	...	...	...	...	12 „	
„ 3. Double ditto	...	...	...	...	...	6 „	
„ 4. Wickered Bottles (small)	...	...	...	...	...	8 „	
„ 5. ditto (medium)	...	...	...	...	...	4 „	
„ 6. ditto (large)	...	...	...	...	...	2 „	

JOHANN MARIA FARINA.



ENEMAS.



433A.	HIGGINSON'S, unvarnished india-rubber, with rectum pipe only, in stout hinged card-board boxes per doz.	£	s.	d.
		1	1	0
433B.	Ditto, with elastic-gum vagina pipe and leather shield "	1	6	0
434.	Ditto, barrel shaped, with bone rectum pipe, elastic-gum vagina pipe, to plug on, and patent leather shield, in slide cedar boxes per doz.	1	14	0
434A.	Ditto, ditto, with disconnecting mounts... .. "	1	16	0
435.	Ditto, cylindrical, superior brass mounts, with bone bulb-pointed seat pipe, elastic-gum vagina pipe to screw on, and patent leather shield, in superior velvet-lined mahogany boxes per doz.	3	0	0
435A.	Ditto, requiring no metal mounts; black, blue, green, red, or white india-rubber, with bone rectum pipe, elastic-gum vagina pipe, and leather shield, in cardboard boxes per doz.	1	16	0
435B.	Ditto, ditto, superior quality, in oval boxes of cloth or leather "	3	0	0
436.	LYNCH'S FAMILY, on Higginson's principle, fitted with bone bulb-pointed rectum pipe for adults, elastic-gum rectum pipe with bone shield for children, and elastic-gum vagina pipe in mahogany box per doz.	2	8	0
437.	Ditto, in slide cedar box "	2	3	0
437A.	LYNCH'S PERFECTION, in mahogany box "	2	17	0
437B.	Ditto, in slide cedar box "	2	10	0
437C.	Ditto, in superior mahogany box, with lock and key "	3	12	0

Discount, 10 % Monthly, 5 % Half-yearly Account.

LOOFARS.

Finest Quality, Large and White 10/ per dozen.
 Second Quality, Smaller, but Good... .. 8/ per dozen.

Discount, 10 % Monthly, 5 % Half-yearly Account.

SEABURY & JOHNSON'S POROUS PLASTERS.

Capsicum... .. 3/4 per doz. | Strengthening 2/6 per doz.

Discount, 10 % Monthly, 5 % Half-yearly Account.

LYNCH & CO.,
ALDERSGATE STREET, LONDON, E.C.

PATENT PLUMBAGO CRUCIBLE COMPANY

(SOLE MANUFACTURERS OF MORGAN'S PATENT CRUCIBLES).

EXHIBITION AWARDS:—

Paris, 1878, Gold Medal.

Only Medals in London, 1862. Dublin, 1865. New Zealand, 1865. Oporto, 1865.
Paris, 1867, only First-Class Medals (Silver). Havre, 1868 (Silver). Amsterdam, 1869 (Highest).
Moscow, 1872, only First-Class (Gold).
Philadelphia Centennial Exhibition, Medal.

CLAY CRUCIBLES, ETC.

EXTERIOR DIMENSIONS.

Attention is drawn to the description on the Crucibles below, and in ordering these particulars should be given to prevent errors and disappointments.

BATTERSEA ROUND.

Stamped as on Illustration.

No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.	No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.
A	2½	1½	£0 0 5	0/6	B	3	1¾	£0 0 6	0/6
C	3½	2½	0 0 9	0/6	D	4	2¾	0 0 10	0/6
E	4½	3½	0 1 4	0/9	F	5	3¾	0 1 5	1/0
G	5½	4½	0 2 0	1/0	H	5½	3¾	0 2 1	1/3
J	6½	4½	0 3 0	1/6	K	7½	4½	0 3 2	2/0
L	8	5½	0 5 6	2/0	M	8½	5½	0 6 6	2/6
N	9	6½	0 9 0	3/0	O	10	7	0 13 6	3/6
P	11	7½	0 15 0	3/6	Q	12	8½	0 17 0	4/0
R	13	9	1 3 0	5/0					

The above 9 sizes form one nest. Price 60/0 per dozen nests. Any size can be had separately.

The above 8 sizes form one nest. Price 45/0 per dozen nests. Any size can be had separately.

BATTERSEA TRIANGLE.

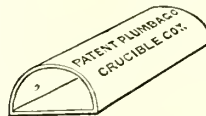
Stamped as on Illustration.

No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.	No.	Height, inches	Width, inches	Crucibles, per doz.	Covers, per doz.
S	4½	4½	£0 2 0	1/0	T	4	3¾	£0 1 6	1/0
U	3½	3½	0 1 1	0/9	V	3½	2¾	0 0 10	0/9
W	2½	2½	0 0 8	0/6	X	2½	2¾	0 0 6	0/6
Y	2½	2½	0 0 6	0/6	Z	1½	1½	0 0 4	0/6

The above 4 sizes form one nest. Price 4½ per dozen nests. Any size can be had separately.

The above 4 sizes form one nest. Price 3½ per dozen nests. Any size can be had separately.

The BATTERSEA ROUND and TRIANGLE forms are particularly well suited for packing, being made to nest, ensuring great economy in freight and shipping charges.



MUFFLES.

With or without apertures.



No.	Long, in.	Wide, in.	High, in.	Price, per doz.	No.	Long, in.	Wide, in.	High, in.	Price, per doz.
A.	7	3½	2½	12s.	G.	11	4	3½	21s.
B.	7½	4½	2½	15s.	H.	10½	5½	3½	25s.
C.	8	4½	3	18s.	J.	12	6	4	33s.
D.	8½	5	3½	21s.	K.	14	8	5	48s.
E.	9	5½	3¾	24s.	L.	15	9	6	54s.
F.	10	6	4	27s.					

Sizes A to F are suited for the Furnaces of the same letters.

H to L have one slit at back only, none at sides.

In addition to those priced above, Muffles are made of all shapes and sizes, suitable for Assayers, Enamellers, Dentists, &c.

SCORIFIERS.

(PER GROSS.)

Inches Diam.	Price.	Inches Diam.	Price.
1	3s. 0d.	2½	6s. 0d.
1½	3s. 6d.	3	7s. 6d.
2	4s. 0d.	3½	9s. 0d.
2½	4s. 6d.	4	10s. 6d.
3	4s. 6d.	5	12s. 0d.
3½	5s. 0d.		

ROASTING DISHES.



No.	Diam. in.	Per doz.	No.	Diam. in.	Per doz.
1	2½	1s. 3d.	3	4	1s. 9d.
2	3	1s. 6d.	4	5	2s. 0d.

ASSAY CRUCIBLES.

THE MINT OF THE UNITED STATES AT SAN FRANCISCO,--

OFFICE OF THE ASSAYER,

SAN FRANCISCO, CAL., April 19, 1877.

SIRS,—I have tested and used the Assay Crucibles and Annealing Cups, and can with assurance recommend their superior quality and durability.

Respectfully yours, &c.,

O. D. MUNSON, Assayer.

STATE ASSAY OFFICE,

SAN FRANCISCO, May 1, 1877.

We have given the Crucibles and Muffles a fair trial, and can recommend them for use of Assayers and Chemists.

Yours, &c.,

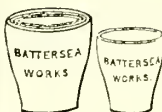
FALKENAU & REESE.

1.—FOR GOLD.

THESE ARE PERFECTLY SMOOTH, AND OF THE CORRECT POROSITY.

No.	Diam. in.	Height, in.	Per doz.
A.	1½	1½	2s. 0d.
B.	1½	1½	2s. 0d.
C.	1½	1½	2s. 0d.
D.	1½	2	2s. 0d.

Covers for either size, 6d. per doz.



2.—FOR COPPER.

CORNISH FORM AND QUALITY.

Nest of Two	Single	Price
3½ in. high, 3 in. diam.	2½	2s. per doz.
2½	2	1s. "
2	1½	1s. "

All Forms and Sizes can be had.

Among the English Firms who have received Awards at the Centennial, Philadelphia, are the Patent Plumbago Crucible Company, Battersea Works, London, for Jewellers' and Chemists' Furnaces, Muffles, Crucibles, and Scorifiers.—*Chemist and Druggist.*

Other particulars on application to

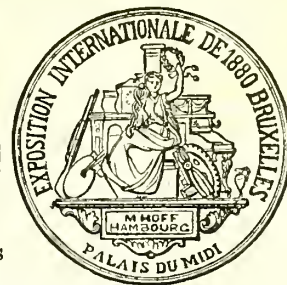
PATENT PLUMBAGO CRUCIBLE CO., BATTERSEA WORKS, LONDON, S.W.



HOFF'S MALT EXTRACT.

THE "RIGHT HAMBURG ARTICLE"

Is Sold by all Respectable Druggists and Chemists throughout the Country.



See that the name of **M. HOFF, HAMBURG**, and the signature of "Leopold Hoff" is on every bottle.

See L. Hoff's Stand at the Medical and Sanitary Exhibition, South Kensington.

LEOPOLD HOFF, 3 Charterhouse Buildings, LONDON, E.C.

ESTABLISHED 1873.

FRANCIS J. W. POLGLASE

(Successor to the Tyne Vale Chemical Company),

TYNE VALE CHEMICAL WORKS, FORTH BANKS, AND SKINNER BURN ROAD,
NEWCASTLE-UPON-TYNE,

MAKER OF

ETHER { PURE, for Medicinal Purposes.
METH., for Ice Making, &c., &c.
METH., Treble Refined, for Photographic Collodion, &c.
Quotations on application.

JULIUS HÜLSEN & CO.,
NEWCASTLE-UPON-TYNE,

SOLE AGENTS FOR THE BLAYDON COLOUR COMPANY, LIM.,

MANUFACTURERS OF

Blanc Fixe (Baryta White).

Chloride of Barium.

Hydrate of Barium.

Sulphide of Barium.

Nitrate of Barium, &c.

BRAND.



BRAND.

FRANK S. STARK

(MANAGER FOR CLARK & CO.),

107 KINGSLAND ROAD,

offers great advantages to Cash Buyers of

TOILET BRUSHES AND COMBS.

The "Perfect" Pattern Tooth Brush, "B." } 5/3 per doz.
"C," "D," or "E,"; first quality
The "Grip" Tooth Brush, ditto, ditto 5/0 per doz.
Best Badger Tooth Brush, ditto, ditto 6/9 per doz.

Hair, Nail, and Shaving Brushes, all kinds, at very lowest prices.

TERMS:—2½ per cent. cash with order, or monthly account net.

N.B.—Please Address all Orders as above.

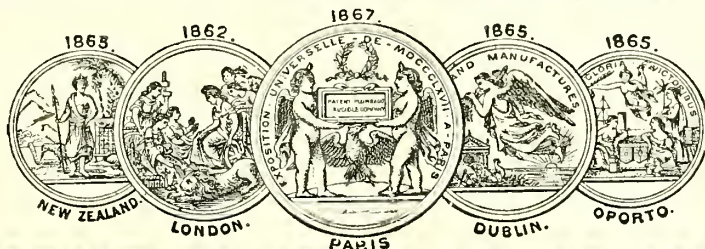
PARIS, 1878, AWARD, THE ONLY GOLD MEDAL FOR PLUMBAGO CRUCIBLES.

Moscow Exhibition, 1872, Gold Medal, **SOLE** award.

Amsterdam Exhibition, 1869, Highest Award.

Havre Exhibition, 1868, **ONLY** First-class Medal (Silver) Awarded.

Paris Exhibition, 1867, the **ONLY** First-class Silver Medals, Classes 40 and 51.



THE PATENT PLUMBAGO CRUCIBLE CO.

(Sole Manufacturers of **MORGAN'S PATENT CRUCIBLES**),

BATTERSEA WORKS, LONDON, S.W.

These Crucibles (**MORGAN'S PATENT**) were the only ones to which Prize Medals were awarded in London, 1862; Dublin, 1865; New Zealand, 1865; and Oporto, 1865. They have been in use for many years in the various Government departments of England, France, Germany, &c., and have been adopted by most of the large Founders, Engineers, Railway Companies, and Refiners at Home and Abroad. The capabilities which have now for so many years distinguished

MORGAN'S PATENT CRUCIBLES

are the following:—Their quality is uniform. They withstand the greatest heat without danger. Their average durability for Gold, Silver, Copper, and other ordinary metals, is 40 to 50 pourings; in some cases over 100 have been obtained. They never crack, and heat more rapidly than any other kind. One annealing only required. Change of temperature has no effect. They can, when hot from the furnace, be dipped in cold water with safety. The saving of labour and metal is very great. In *Steel Melting* the Saving of Fuel has been demonstrated to amount to a ton and a half to every ton of Steel fused. For *Zinc* they last longer than iron pots, and save the great loss which arises from mixture with iron. Those for *Malleable Cast Iron* show an average working of several days, doing each day nearly double the work of any other Crucible.

As these Crucibles last longer than others, it follows that the Saving of Metal must be great, because to each worn Crucible a quantity of metal adheres. In fact, comparing Morgan's Patent with other Crucibles, the *Saving of Metal, Time, and Fuel*, alone is more than equivalent to their Cost.

SOLE MANUFACTURERS:

THE PATENT PLUMBAGO CRUCIBLE COMPANY, BATTERSEA WORKS, LONDON, S.W.

THE "OTTO" SILENT GAS ENGINE.

NO BOILER OR STEAM NEEDED.

HIGHEST AWARDS AT SYDNEY AND MELBOURNE EXHIBITIONS.

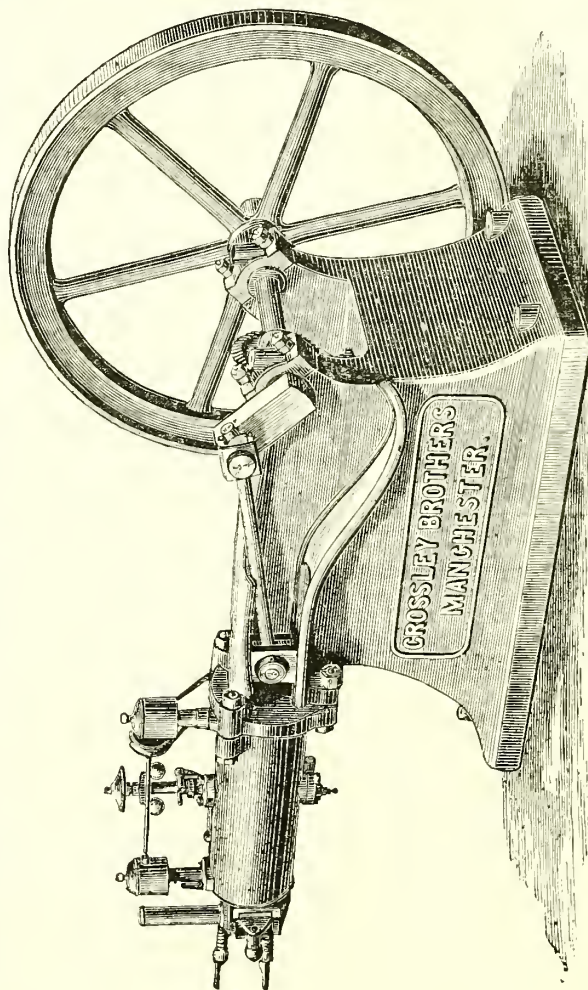
Nearly 5,000 Ottos
now at Work.

Particularly suitable
for Aerated Water Work,
Drug Grinding,
Hoisting, &c.

Please write for
Special List of Engines
doing this Work,
and Testimonials.

LONDON HOUSE:
24 Poultry.

LIVERPOOL STORE ROOMS:
Basement, Corn Exchange.



1 H.P. and 16 H.P. type of Engine.

STARTS AT A MOMENT'S NOTICE.

SIZES {	Nominal Horse Power	...	...	1	2	3½	6	8	12	16	}	OFFERED.
	Maximum Indicated Horse Power	...	...	1.1	2.26	3.96	5.9	11.57	14.7	23.1		

Nearly 5,000 Ottos
now at Work.

ADVANTAGES AS
Compared with Steam.
No Heat. No Danger.
No Dirt. No Chimney.
No Dust. No Smoke.
No Extra Insurance.
No Glands to Pack.
No Safety Valves to Watch.
Always Ready.
Occupies little Space.
Requires no constant attendance.
May be run Night and Day.

GLASGOW HOUSE:
193 Sauchiehall Street.

BRISTOL HOUSE:
127 Redcliff Street.

CROSSLEY BROTHERS,

CALEDONIAN FOUNDRY, MANCHESTER.

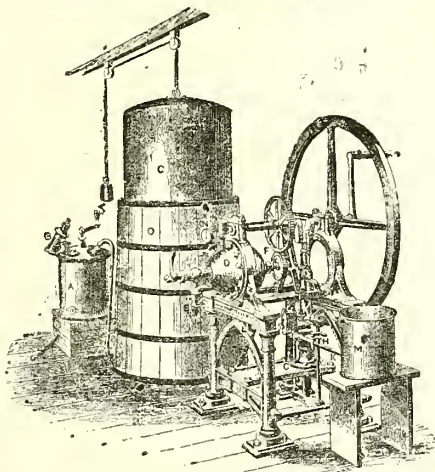
AGENCIES WITH STOCK AT ALL PRINCIPAL COLONIAL PORTS.

GOLD MEDAL, PARIS, 1878.

HAYWARD TYLER & Co

21

BRAMAH'S
CONTINUOUS PROCESS MACHINE.



611.—Bramah's Continuous Process Machine.
MANUFACTURED BY HAYWARD TYLER & Co.

PRICES AND PARTICULARS

No 1.—Machine with 2½ gallon condenser and 2 inch pump, to produce 300 to 400 dozen a day	£71 10	0	0	Packing	£4 0 0
No 2.—Machine to produce 200 to 250 dozen a day	£66 0 0	0	0	for	£3 15 0
No 3.—	150 to 160	•	£19 10 0	•	export £3 6 0
No 4.—	80 to 100	•	£19 10 0	•	£2 15 0
No 5.—	40	•	£28 0 0	•	£1 15 0

The Machines may be driven by hand or steam power; if fast and loose pulleys for the latter purpose are fixed on the shaft, the price is £2 10s. extra.
It is extremely difficult to give an accurate estimate of the quantity which each machine will turn out, owing to the difference of practice in different places. In hot countries it is impossible to produce as much as in cooler climates, owing to the expansion of the gas. The figures which we give here and in other places are based upon the actual practice of our customers.

84 & 85 UPPER WHITECROSS STREET, LONDON.

HIGHEST AWARD, MELBOURNE, 1881.

AT AGRICULTURAL HALL, AUG. 22, to SEPT. 3.

BINGLEY'S



ANALYSED

SODA WATER.
SELTZER.
POTASH.
LEMONADE.
LITHIA, &c.

MANUFACTURED BY

JOHN BINGLEY, Pharmaceutical Chemist,
NORTHAMPTON.

A copy of Professor Atfield's Report will be forwarded by
post on application.

Caution

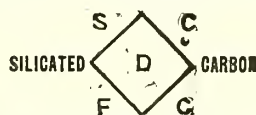
W. A. ROSS, the Original Patentee and Maker of
The Celebrated Belfast Ginger Ale, cautions
the Public that the "GENUINE" can only be had at

Ross's Royal Ginger Ale
AND
Aerated Water Works Belfast.

NAME ON CORK, CAPSULE, AND LABEL REGISTERED.

EXPORT ORDERS HAVE SPECIAL ATTENTION.

SILICATED CARBON FILTERS.



Prize Medals—PARIS, 1867. HAVRE, 1869.

ADOPTED, IN PREFERENCE TO ALL OTHERS, by
the Admiralty, and used in the General Post Office, the London and
Provincial Hospitals, and many Public Establishments in various parts of
the World.

SILICATED CARBON FILTER COMPANY,
CHURCH ROAD, BATTERSEA, LONDON.

See two-page Advertisement in this No.

SODA WATER MACHINERY BY BARNETT & FOSTER,

23rd FORSTON STREET, SHEPHERDESS WALK, LONDON, N.

Prize Medals—London, 1862, 1873, 1874; Paris, 1867,
1878; Vienna, Philadelphia, Cape, &c. Highest
Award, Sydney, 1879-80.

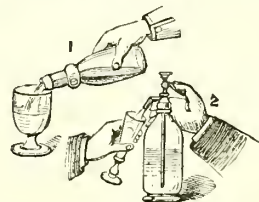
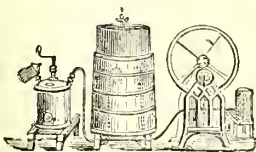
Our Machines are universally adopted throughout the world for the manu-
facture of all kinds of Aerated Drinks, whether in bottles, syphon, or
counter fountains. There are in England alone over 1,500 factories where
our Machinery is in use. They are the simplest, safest, and cheapest for
the purpose, and produce a highly-charged gaseous water free from metallic
or foreign contamination.

All our Machines have a Gasometer, and it forms a most important necessity where purity of product is required, as in this the gas
is expanded and purified; it also removes the possibility of explosion, and avoids the necessity of complication—these we consider of
greater importance than the saving of a few inches of floor space.

Our valuable Book of Recipes and Instructions accompanies every Machine, and the most unskilled can at once produce
Waters of the highest class.

Sole Agents for Codd's Patent Bottle, Fig. 1. Sole Manufacturer of the "London-made" Syphon, Fig 2
PATENTEES OF THE IMPROVED CORKING MACHINE FOR CHAMPAGNE BOTTLES.

ILLUSTRATED CATALOGUE FORWARDED FREE.



Hunyadi János

CAUTION.—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to WARN the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."

NOVELTIES IN BOTTLES AND STOPPERS.



THE
GLASS, EBONITE, PORCELAIN, &c.
DISC BOTTLE,

WITH NEW PATENT PURE RINGS,
SIMPLE, PERFECT, UNIQUE.

Likely to supersede all other Patent Bottles.



*The Disc effectually covers the rubber
when the bottle is filled.*

These Bottles and Ebonite and
Porcelain Discs can be supplied
at a cheaper rate than the
Prepared Glass, as No. 1.

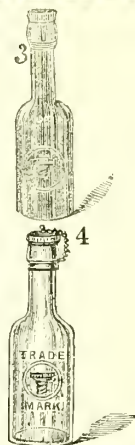
THE SCREW STOPPER & BOTTLE,
For Ales, Porter, Cider, and
Brewed Beer.

The Screw Stoppers can be attached to the necks of
the Bottles by a band of wire and a small chain, if
preferred; price about 3s. 6d. extra. See Fig. 4.
When bottling, the Stoppers must be wetted before
screwing them in. Screw it gently but firmly home.
They should not be subjected to the action of any
strong alkali, or great heat, and are not recommended
for bottling spirits at present.

Essential and Indispensable for every
Refreshment Room Proprietor, for every Hotel
and Public-house, and for every Householder.

Our other, and well-known Stoppers,
&c., still supplied as usual.

SAMPLES ON APPLICATION.



OUR ORIGINAL AND WELL-KNOWN
STOPPERS HAVE NOW BEEN
IN USE FOR YEARS BY
UPWARDS OF 1,000



MINERAL WATER MANUFACTURERS
AND OTHERS THROUGHOUT
THE UNITED KINGDOM
AND THE WORLD.

BARRETT & ELMERS, 9 Dacre Street, Westminster, LONDON, S.W.

VALLET'S PATENT.



Fig. 3.



New Stopper.

The Stoppers are made in six different sizes—Nos. 1, 2, 3, 4, 5, and 6.
Nos. 4, 5, and 6 are most suitable for general use, the Bottles adapted to
which having sufficient capacity in the mouth to allow a copious flow of the
liquid, whilst Nos. 1, 2, and 3 are specially made for Bottles which have
only a small mouth, thus retarding the flow of the liquid, and causing the
evaporation of the carbonic acid gas before the Bottle can be emptied.

ROYALTY FREE.

All Communications to be addressed to

L. VALLET, 49 Everton Road,
LIVERPOOL.



Fig. 2.—THE STOPPERED AND FITTED BOTTLE.

AWARDED THE CERTIFICATE OF MERIT AT THE SANITARY EXHIBITION OF GREAT BRITAIN.

A SIX DOZEN CASE,
which may be assorted, to
any Railway Station for
36s., returned Empty al-
lowed 18s.

A Liberal Discount to the Trade,
who should send for Sample Case
before ordering elsewhere.



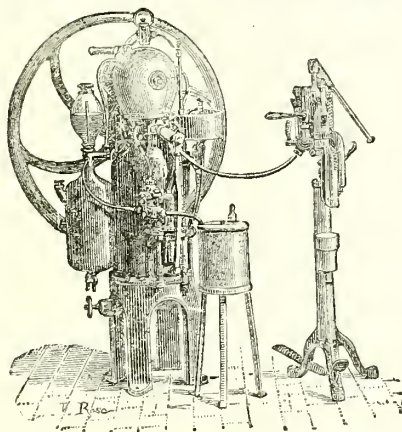
Telegram from Melbourne Exhibition,
May 7, 1881.
To Messrs. Samuel Gulliver & Co.,
Aylesbury.

"TWO FIRST-CLASS AWARDS for your
Exhibit, being the Highest Honours obtain-
able for Mineral Waters. Special reference
being made to the Good Quality."
Also Two Second Awards and Honourable
Mention—Five Honours in all.

GOLD MEDAL, THE THEORY AND PRACTICE OF SODA WATER PARIS, 1878.

MANUFACTURING REDUCED TO ITS

SIMPLEST FORM BY THE USE OF

MONDOLLOT'S PATENT**SODA WATER MACHINERY.***Continuous Mechanical Pressure without gasometer. A modified and improved form of the old Bramah system.***MOST COMPACT AND
SIMPLE.****NO DANGER OF
EXPLOSION.****NO WASTE OF
SULPHURIC ACID.****ENTIRELY
AUTOMATIC.****NO SKILLED LABOUR
REQUIRED.****NO PREVIOUS KNOW-
LEDGE NECESSARY.****WHEN YOU ARE NEXT IN LONDON COME AND SEE THE MACHINE AT WORK.****PRICES.****COMPLETE MACHINES.**

No.	to produce	75 doz. per day	...	£25	...	Packing	£1
" 1	"	150	"	...	£42	...	" £2
" 2	"	300	"	...	£63	...	" £3
" 3	"	600	"	...	£104	...	" £4
with double Generators }							
" 3	without Double Generators			£58	...	"	£2
fitted with Double Purifiers }							

GENERATORS ALONE.

GENERATOR— <i>To supply Carbonic Acid Gas to Machinery Making</i>							
No.	...	75 doz. per day	...	£6 12/	...	Packing	10/
" 1	"	150	"	...	£22	...	" £1
" 2	"	300	"	...	£31	...	" £1 10/
DOUBLE Generator—							
" 3	...	1,000	"	...	£46	...	" £2
" 4	...	2,000	"	...	£60	...	" £3
" 5	...	3,000	"	...	£84	...	" £4

The apparatus is self-acting and self-supplying, and can never leave in the residue a particle of oil of vitriol which is not completely used up. The only Machine which renders the manufacturer independent of skilled labour, and which is thoroughly self-dependent when once started. All sizes of these Machines, and all duplicate parts kept in stock. Estimates on application.

MONDOLLOT SYPHONS,**THE SYPHON FOR STRENGTH, DURABILITY, AND ELEGANCE.****EVERY SYPHON TESTED. TOPS OF PURE TIN.****PRICES.****QUART SIZE.**

	Long Lever.	Short Lever.
	Per doz.	Per doz.
Pear-shaped or cylindrical, white or blue glass	27/	26/
" " green or yellow	" 28/	27/

Special terms for large quantities.

Name stamped on the head free of charge for any quantity over one gross.

Silver-plating, according to the amount of silver used, from 1/ per Syphon.

HALF-PINT SIZE.

	Long Lever.	Short Lever.
	Per doz.	Per doz.
Pear-shaped or cylindrical, white or blue glass	26/	25/
" " green or yellow	" 27/	26/

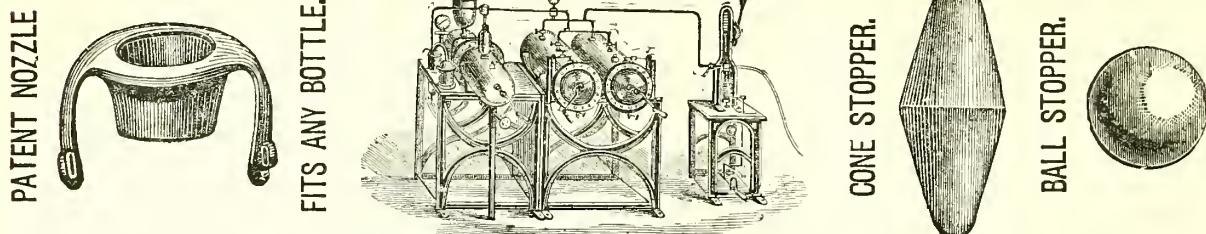
Nickel-plating by a New Process, 4/ per dozen.

Name, Trade Mark, and Address engraved on the bottle by the most approved process. Prices, according to design, about 2d. per Syphon for quantities over 1,000.

SAMPLES SENT ON APPLICATION.*Catalogue, Testimonials, and information of any kind connected with the Trade on application to—***H. FAVARGER, 75 TURNMILL ST., LONDON, E.C.**

(LATE MONDOLLOT & CO.)

SODA-WATER MACHINERY.



SODA WATER MACHINE COMPLETE, WITH RACK.

DAVENPORT'S NOZZLE AND STOPPER is the best Patent for utilising old Bottles, and converting them into Patents. No Corks or Wire, and saving entire cost in one season. The New Nickel-plated Nozzle makes this the most attractive Patent in use. Trial allowed. Prices lowered. Send for Samples. New Bottles ready fitted for use now supplied. Catalogues of Soda-Water Machines, Ice-Making Machines, Engines, Boilers, Copper Cylinders, Syphons, Seltzogenes, Filters, &c., and all accessories to the Soda-Water Trade.

AGENTS FOR HAYWARD TYLER & CO.'S SODA-WATER MACHINERY.

„ „ BARRETT & ELSER'S Patent Stoppers in Lamont's Bottles.

Illustrated Catalogues, of sixty-four pages, post free to all parts of the World.

DAVENPORT & CO., Soda-Water Machinists and General Machinery Agents,
99^N HIGH HOLBORN, LONDON.

THE CONDY'S FLUID CO.,

7 Falcon Street, London.

BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR
FIRM AND GENUINE PRIZE MEDAL LABELS, WITH
FICTITIOUS ADDRESSES.

GOUGH'S GOOD TEMPLAR SPARKLING CHAMPAGNE.

18s. per Dozen Bottles;

22s. per Two Dozen Half Bottles.

*Duty paid in
London, or f.o.b.
Export Ship
there.*

I have appointed **CHARLES KINLOCH & CO.,** Backchurch Lane, London, E., **SOLE AGENTS** for England, Germany, France, Italy, Russia, the English Colonies, and America, for the Sale of my Wine.

JULES DELARUE,
Maruil-sur-Ay, France.

ALL ORDERS MUST BE SENT DIRECT TO MY AGENTS.

N. G. WILCOCKS' SODA WATER MACHINES, SECOND-HAND.

FOR SALE, VARIOUS MAKES, PRICES, AND POWERS.

Also complete Plants, with Steam Power and Bottling Apparatus, cheap. A Soda Water Machine to make 75 dozen per day, £17. Amongst our collection is Second-hand Machinery by Hayward Tyler, Barnet, Mondolot, Davenport, Tyler & Son, &c.

Necessary Instructions, Recipes, and all information are included with each machine without extra charge. We have a plant in complete working order, from which we make a daily free supply to our own workpeople. Buyers will have the advantage of seeing a machine put to work and tested before purchasing, and of learning how to use it, and will also be shown how to bottle the Patent and Cork Bottles, without extra charge. All orders personally attended to by

N. G. WILCOCKS, Soda Water Machinist, Back Street, Bath.

SECOND-HAND LIST POST FREE.

BRATBY & HINCHLIFFE, AERATED WATER ENGINEERS AND VALUERS,

Wish to inform Chemists and others, who contemplate manufacturing their own Aërated Waters, that they supply and fix complete any size or kind of **SODA-WATER PLANT**, to make from 100 to 2,000 dozen per day, and give practical instructions how to manufacture the different kinds of beverages of first-class quality.

Every requisite for the Trade supplied and kept in stock ready for immediate delivery. Engines and Boilers combined or separate, Boxes, Patent or Ordinary Bottles, &c., &c.

BOTTLING MACHINES.

SOLE AGENTS FOR THE "RAPID PARAGON TURNOVER FILLING MACHINE," FILLS ALL PATENT BOTTLES.

A large quantity of second-hand Machinery and Appliances always on stock.

For particulars see our Monthly List and Circulars, which are sent post free on application.

POTT ST., ANCOATS, MANCHESTER.

THE GREAT SUCCESS.

F. BIRD'S CHAMPAGNE FRUIT POWDER

For making **FRUIT CHAMPAGNE**. Sparkling and Effervescing. Marvellously cheap. An ordinary large champagne bottle will cost 1d., and half-pint bottles 3½d. per dozen. Retail at 4d. Directions on each Packet.

Constantly used by Mrs. Wallace Gothard (Professor of Cookery and Domestic Economy) at the Alexandra Palace.

F. BIRD'S DELICIOUS RASPBERRY BEER POWDER

Produces **RASPBERRY BEER** clear, bright, and sparkling.

F. BIRD'S LEMON BEER POWDER, for making **LEMON BEER**.

F. BIRD'S GINGER BEER AND POP POWDER, for producing this popular beverage quicker and better than by any other method known. Prices 27s. and 36s. per gross; also in 3 and 6 doz. Boxes. N.B.—specially packed for exportation.

Prepared only by **F. BIRD, Chemist, COVENTRY.**

WHOLESALE LONDON DEPOT—223 UPPER THAMES STREET.

BARCLAY, NEWBERRY, SUTTON, HARVEY, SHEPHERD & CO., London; HARRIS, Birmingham; EVANS, Liverpool, and all Patent Medicine Houses. See Testimonials, &c., and Bills.

LISTER'S "LONG LIFE SALT," "EFFERVESCENT SALINE POWDER,"

In Patent Stoppered Bottles, price 1s. 9d. per Bottle. Packed in handsome Box for Travellers and Residents in the Tropics.

The most Palatable and Agreeable Saline ever yet placed before the Public. Recommended by the Faculty.

PURCHASING AGENTS WANTED.

Sample Dozen at the VERY LOWEST WHOLESALE PRICES.

OFFICE—36 JEWIN ST., ALDERSGATE ST., E.C.,

OR ALL WHOLESALE CHEMISTS AND DRUGGISTS.

ZOE D O N E.

TRADE PRICES: 5/ per dozen small bottles; 9/6 per dozen large bottles.

TERMS: 5 per cent. for Cash with the Order, or 2½ per cent. Quarterly Account.

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and BATH BRIDGE, BRISTOL.

Price List and Pamphlet on "NATURAL MINERAL WATERS: their Properties and Uses," forwarded on application.

FOREIGN

Mineral Waters and Zoedone.

FREDERICKSHALL (5 Cases, 6d. per Case less), 24/6 Case, 30 bot.; 34/ Case, 60 ½-bot.

APOLLINARIS (10 Hprs., 1/- and 1/6 less), 24/ Case, 50 bot.; 36/6 Hpr., 100 ½-bot. Hampers free.

HUNYADI JANOS (10 Cases, 3/- and 5/- less), 30/- Case, 25 bts.; 50/- Case, 50 ½-bts.

SELTZER ... 11/- Hpr., 25 bts.
... 15/- Hpr., 50 ½-bts.

PULNA ... 15/- Case, 20 bts.
... 30/- Case, 50 ½-bts.

VICHY ... 31/- " 50 bts.
... 27/- " 50 ½-bts.

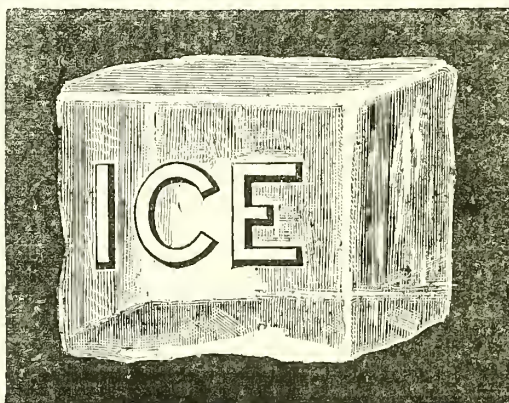
CARLSBAD ... 37/- " 50 bts.
... 42/6 " 50 "

KISSENGEN ... 27/6 " 50 "
SCHWALLBACH ... 37/6 " 50 "

HOMBURG ... 40/- " 50 "
WILDUNGEN ... 27/6 " 50 "

CARLSBAD SALTS, ½-Bots., 29/- per doz.; ½-Bots., 40/- per doz.; Bot., 50/- per doz.

ZOEDONE, 5/- per doz., 6-doz. Cases (if 5 Cases, 3d., 10 Cases, 3d., 20 Cases, 4d. per doz. less).



REGISTERED AT STATIONERS' HALL.

Norway Block Ice.

ORIGINAL BLOCKS ... 1/9 per cwt.
1 cwt. to 2 cwt. ... 2/6 "
½ cwt. to 1 cwt. ... ½d. per lb.

Packing and Mats for Original Blocks free 3d. each allowed for Mats if returned.
Present Season's Ice specially fine and extra thick. Low quotations given for quantities taken from vessels while discharging.

PRINTED DIRECTIONS for STORING ICE sent free on application.

W. B. HARRISON,
IMPORTER OF ICE AND
MINERAL WATERS,
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JEWSBURY & BROWN'S MANCHESTER

MINERAL WATERS,

PURE SODA, SELTZER, POTASH, LITHIA, &c.,
LEMONADE,
GINGER ALE, AND QUININE TONIC.

Prepared and Bottled specially for Export, and warranted to keep well.

Manufactured with the utmost care and by improved machinery, these productions are recommended for purity and excellence of quality by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the Lemonade and Ginger Ale being procured from the fresh Fruit and Finest Jamaica Ginger, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The Soda Water is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of Pure Carbonate of Soda, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The Seltzer, Potash, and Lithia Waters are prepared with the utmost exactitude and the purest ingredients.

The New Quinine Tonic furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

Ginger Ale (Aromatic) of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

N.B.—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

A CERTIFICATE OF MERIT, for superiority of quality, was awarded to Jewsbury & Brown at the Exhibition of Sanitary Appliances, at Owens College, Manchester, on the occasion of the Meeting of the British Medical Association, August, 1877.

A CERTIFICATE OF MERIT awarded by the British Sanitary Institute of Great Britain, after a deferred PRACTICAL TRIAL AND EXAMINATION, July 4th, 1878.

JEWSBURY & BROWN, 44 Downing Street, 3 Grosvenor Street, and 113 Market Street, MANCHESTER.

ZOEDONE

A DELICIOUS BEVERAGE.

The BRITISH MEDICAL JOURNAL says:—

"We can confidently recommend it to the attention of physicians and others who are occasionally at a loss what to direct their patients to take when parched by feverish thirst or depressed by exhausting ailments—notably in cases where alcoholic stimulants would be prejudicial. We feel that it would be found exceedingly useful in mitigating the discomfort oftentimes experienced by those suffering from the thirst, loss of appetite, and general *malaise* connected with the last stage of phthisis and chronic bronchitis. We would also, from our observations and experience, advise its introduction into clubs, taverns, and places of public amusement, where it would judiciously supersede vinous and alcoholic stimulants, seeing that it contains, as its name implies, life-giving ingredients in a form easily assimilated."

A BRAIN AND NERVE TONIC.

The LANCET says:—"ZOEDONE contains the soluble phosphates of lime, iron, soda, and potash, in medicinal quantities. Very efficient and pleasant."

The MEDICAL PRESS AND CIRCULAR says:—"Is commendable equally for the style in which it is put up and the delicate flavour which it possesses, and also on account of its special merits as a nervine tonic."

NON-ALCOHOLIC.—STIMULATES BY STRENGTHENING.

CAUTION.—Dealers should be on their guard against numerous imitations of ZOEDONE, put up in the same style and offered as substantially the same article. The composition of ZOEDONE is protected by Letters Patent, and the Zoedone Company will proceed against infringements.

Every Chemist that has introduced ZOEDONE has found a large and regularly increasing sale for it. It is put up in Champagne Bottles, and there is no trouble with empties, as the bottles are included in the price. Customers supplied with Pamphlets for distribution; also a special Circular for medical men stating the formula.

ZOEDONE is admirably adapted for hot climates.

ZOEDONE is supplied on the following Terms, Cash Prices, free on Rails at Wrexham:—

SMALL Champagnes,	6/6 per dozen (EXPORT,	7/0 per dozen),	in 6 dozen cases.	
"	" 6/8	" 7/2	" 3	"
"	" 6/9	" 7/3	" 2	"
"	" 6/10	" 7/4	" 1	"
LARGE	" 12/0	" 13/0	" 3	"
"	" 12/6	" 13/6	" 1	"

Bottles and Packages included.

Application for Trade Terms should be accompanied by Business Card.

WHOLESALE AGENTS:—

LONDON—Allen & Hanburys.	BELFAST—Grattan & Co.	HULL—Lofthouse & Saltmer.
" Barelly & Sons.	" Clarke & McMullen.	KENDAL—Severs & Bateson.
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" Edwards & Sons.	BRADFORD—Harrison, Parkinson & Co.	LIVERPOOL—Clay, Dod & Case.
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" Hearon, Squire & Francis.	CHELTENHAM—Joseph James.	" Raimes & Co.
" Ingram & Royle.	CORK—W. & H. Goulding.	" R. Sumner & Co.
" Lynch & Co.	" T. R. Lester.	" Clay & Abraham.
" S. Maw, Son & Thompson.	COVENTRY—Wyleys & Co.	" Symes & Co.
" F. Newbery & Sons.	DUBLIN—Hamilton, Long & Co.	MANCHESTER—James Woolley, Sons & Co.
" Probyn & Co.	" Johnson & Oldham.	NEWCASTLE-ON-TYNE—Brady & Martin.
" Savory & Moore.	" A. & R. Thwaites & Co.	NICE—J. Daniel.
" Wright, Layman & Umney.	EDINBURGH—Duncan, Floekhart & Co.	NORTHAMPTON—Frederick Kirby.
ABERDEEN—W. Paterson & Sons.	" John Mackay & Co.	PARIS—Hogg, 2 Rue Castiglione.
	EXETER—Evans, Gadd & Co.	SOUTHAMPTON—Randall, Sloper & Co.
	GLASGOW—The Glasgow Apothecaries' Co.	YORK—Henry J. Pratt.

Retail Agents whose names are not on the published list should communicate with the Manager.

PATENTEE—DAVID JOHNSON, F.C.S. MANAGER—JOHN MOSS, F.I.C., F.C.S.

Manufacturers—THE ZOEDONE COMPANY (Lim.), Wrexham, North Wales.

LONDON OFFICE: 25 ABCHURCH LANE, E.C.
ZOEDONE BUREAU FOR FRANCE: 7 RUE ROYALE, PARIS. ZOEDONE BUREAU FOR BELGIUM: 2 RUE DE LOXUM, BRUSSELS.

NOTE.—ALL orders for the Company must be sent to Wrexham.



"At the Exhibition of Pharmaceutical Society Hedozone was received with universal favour, and pronounced to be the best of the new non-alcoholic beverages."

"HEDOZONE"

Is the Original Sparkling
PHOSPHATED IRON TONIC,

PREPARED UNDER THE PERSONAL SUPERVISION OF THE INVENTOR.

HEDOZONE was first successfully produced in 1876. No similar article imitating it can be compared with HEDOZONE in all those qualities which constitute its special value as a **TONIC BEVERAGE AND FOOD DRINK FOR DAILY USE.**

It represents important improvements in the manufacture of **NON-ALCOHOLIC BEVERAGES.**

It contains, in the most assimilative form, the life-giving and tissue-forming Mineral Phosphates.

It is prepared by a novel process with **DISTILLED WATER**, which insures its purity and promotes the assimilation of the nutritive elements by the system.

Wholesale and Export Terms, Descriptive Pamphlet, and numerous Testimonials sent, post free, on application to the Manufacturers.

Before Vice-Chancellor Sir R. Malins.

ZOEDONE v. HEDOZONE.

The Zoedone Company have submitted to pay all costs, charges, and expenses of the above action, and have thereby admitted in fact that Hedozone is not, as was alleged by them, an imitation of Zoedone either in name or mode of preparation.

The evidence in the cause would have conclusively proved that not only is HEDOZONE the earlier invention, but that by the use of **DISTILLED WATER** and other originalities in manufacture, it is different from, and is in fact **SUPERIOR** to, Zoedone as a **NON-ALCOHOLIC STIMULANT.**

The Official number of the Hedozone Trade Mark is 22,493.

The Official number of the Zoedone Trade Mark is 22,579.

PACKHAM & CO., Limited, CROYDON.

W. J. BUSH & CO.,

Distillers and Importers of
Essential Oils & Fruit Essences,
 SPECIALITIES FOR AERATED WATER AND CORDIAL MANUFACTURERS,
ESSENCE LEMON,

EXTRA SUPER QUALITY,
The only pure Essence imported, made at our Works at Sicily.

ESSENCE GINGER ALE,
 For Winter Drinks.
TONIC ESSENCE,
 FOR BITTER WATER.

Soluble Essence Lemon.
SOLUBLE ESSENCE GINGER.
SOLUBLE ESSENCE OF PEPPERMINT.

BEWARE OF SPURIOUS IMITATIONS.

W. J. B. & Co. caution the Trade against the so-called Soluble Essences now so frequently offered for sale, which are nothing more than mere Tinctures; and although offered at lower prices, cost 5 or 6 times as much in use, whilst imparting a strong medicated flavour. W. J. B. & Co. further beg to inform their friends that Aerated Drinks as Pale Ale, Horehound Beer, &c.—made from their Soluble Essences are exempt from Excise regulations.

NONE OTHERS ARE GENUINE.

CAUTION. GUM EXTRACT

(French Cream),

PROTECTED BY ROYAL LETTERS PATENT.

*For producing a Permanent Head of Creamy Richness on
 Ginger Beer, Ginger Ale, Lemonade, and other Aerated
 Beverages; also on Beers, Ciders, Wines, &c.*

2s. 6d. per lb.

TO MAKERS AND VENDORS OF EFFERVESCENT
 DRINKS, AND TO THE PUBLIC GENERALLY.

IN the High Court of Justice—Chancery Division—on Thursday, June 10, 1880, before Vice-Chancellor Sir C. Hall, an application was made in the action of *Bush v. Young* to commit the defendant to prison for disobeying an injunction whereby he had been restrained from selling, imparting, or publishing a recipe, which is an infringement of a certain patent known as "Gum Extract," the property of the plaintiff, which is used in the mineral water trade for giving a creamy head or foam to ginger beer and other beverages; the defendant having published and sold a recipe for the preparation of the same compound under the name of "Compound Fluid of Saphacanium," to be used for the same purpose. The defendant resisted on the ground that the bark used by him was not the same as that used by the plaintiff, being known as "Panama Bark."

The plaintiff, however, proved that this was in fact the same, and the Court granted the injunction. The defendant also threatened to publish the recipe unless it were bought up by the plaintiff.

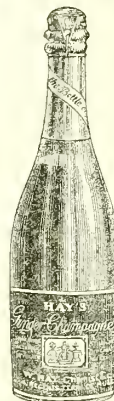
His lordship made an order that in default of defendant paying the costs, he should stand committed to prison.

All persons infringing the above patent will be proceeded against, and those who give information of such infringement will be liberally rewarded.

W. J. BUSH & CO.,
 20-23 Artillery Lane, Bishopsgate, London, E.

HAY'S GINGER CHAMPAGNE.

A DELICIOUS
 NON-
 INTOXICATING
 AND
 INVIGORATING
 TONIC
 BEVERAGE.



PRICE,
 IN HALF-PINT
 CHAMPAGNE
 BOTTLES,
 5s. 6d.
 PER DOZEN.

This SPARKLING, EXHILARATING, and REFRESHING DRINK, while being far more agreeable in bouquet and flavour than the FINEST CHAMPAGNE WINE, is, at the same time, unlike it, FREE from ALCOHOL.

It is strongly recommended both for Juveniles as well as for Adults, as the most wholesome stimulating beverage that has hitherto been introduced, and should be in every household during all seasons of the year.

"One of the most delicate and wholesome drinks in the market. The creaminess, colour, and even the aroma of champagne are precisely imitated, and the after flavour of the Ginger Essence is peculiarly grateful."—*Medical Press*.

"Made by Mr. Hay, of Hull, with his well-known SOLUBLE ESSENCE OF JAMAICA GINGER, takes rank as a PURE, WHOLESOME, STIMULATING, and NON-ALCOHOLIC beverage."—*British Medical Journal*.

"So much does it please the palate that one feels inclined to open a second bottle after having drunk the first. This is a beverage which the practitioner can safely recommend."—*Medical Times and Gazette*.

"Mr. Hay, of Hull, deserves abundant success with his GINGER CHAMPAGNE. It is an exhilarating, wholesome, and very agreeable beverage."—*The Chemist and Druggist*.

"Creamy, sparkling, and pleasantly aromatic; is in our opinion the best thing of its kind yet introduced."—*Eastern Morning News*.

SOLE MANUFACTURER—

W. HAY, Chemist, &c.,
 4 Regent's Terrace, HULL.

WHOLESALE AGENTS—MESSRS. INGRAM & ROYLE,
 119 QUEEN VICTORIA STREET, LONDON, E.C.

CHEMISTS' AERATED AND MINERAL WATERS ASSOCIATION, LIMITED.

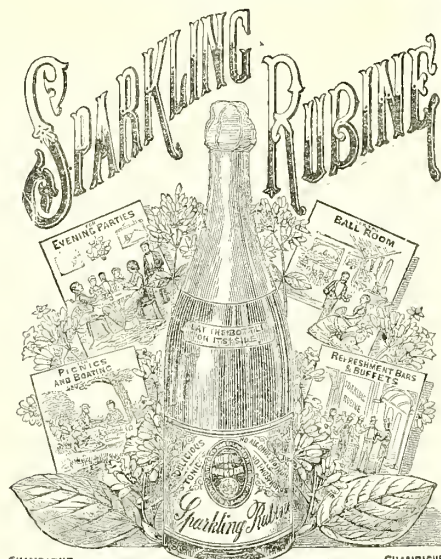
SPARKLING LIMINE.

*A Delicious Lime Fruit Beverage.
Free from a Musty Flavour.*



Of Chemists, 5/6 and 8/6 per dozen.

*Contains no Iron, no Phosphorus,
but FRUIT AND VEGETABLE
PRODUCTS ONLY.*



Of Chemists, 5/6 and 8/6 per dozen.

SPARKLING RUBINE.

Offices and Factories—45 Gifford Street, and 112 Pembroke Street, Caledonian Road, London; and Harrogate.

FOREIGN MINERAL WATERS.

FOREIGN LIQUEURS.

FOREIGN WINES.

FOREIGN SPIRITS OF EVERY DESCRIPTION.

ANGOSTURA BITTERS.

APPLY TO

**JAMES SMITH & COMPANY, IMPORTERS,
LIVERPOOL: 9 LORD STREET.**

"ABSOLUTELY PURE."

SEE ANALYSIS. Sent post free on application.

ELLIS'S



REGISTERED.

RUTHIN

WATERS.

Soda, Potass,
Seltzer, Lemon-
ade, also Water
without Alkali.
For GOUT,
Lithia Water, &
Lithia &
Potass Water.

CORKS BRANDED "R. ELLIS & SON, RUTHIN," and every
label bears their Trade Mark. Sold everywhere, and wholesale of

R. ELLIS & SON, RUTHIN, NORTH WALES.

London Agents: W. BEST & SONS, Henrietta St., Cavendish Square.

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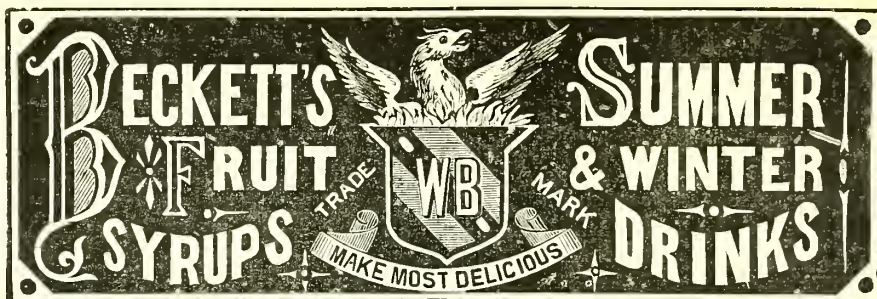
**AERATED WATERS,
Newport Pagnel.**

ESTABLISHED 1835.

**SODA, POTASH, SELTZER, AERATED (without
Alkali), and LITHIA WATERS,
LEMONADE AND GINGER ALE.**

*Each Bottle is protected by a Label bearing the Signature
of the Firm.*

Purity and Excellence of the Water certified by Analysis
by Professor ATTFIELD, Ph.D., F.C.S.



SPECIALLY FOR SUMMER.

LIME FRUIT.

LEMON.

ORANGE.

BLACK CURRANT.

STRAWBERRY.

RASPBERRY.

JARGONELLE PEAR.

PINE APPLE.

SPECIALLY FOR WINTER.

WINTERINE OR

WINTER PUNCH.

GINGER LEMON.

LIME FRUIT CORDIAL

AROMATIC BLACK

CURRANT.

PEPPERMINT.

GINGERETTE.

CLOVE CORDIAL.

By the simple addition of two table-spoonfuls of these Syrups to a tumblerful of hot or cold water, most wholesome and refreshing drinks are immediately prepared, as pleasant to the taste as they are invigorating to the system. For Gazogenes and the Syphon Soda Water Bottles they are admirably adapted. Put into a tumbler a large spoonful of any of the Syrups, and fill it up with the Gaseous Water. They are also largely used for flavouring Puddings, Jellies, Custards, and Blane-Mange.

These Drinks are specially suitable for the Sick Room, Pic-nics, Weddings, Christmas and Birthday Parties, &c., &c.

TESTIMONIALS.

"We suggest a trial of Beckett's admirable Fruit Syrups, so well fitted both for the dinner table and for juvenile and senior parties."—*Church of England Temperance Chronicle.*

"All Mr. Beckett's Preparations are tastefully bottled and labelled, and their bright appearance makes them ornamental to the shelves of the Confectioner and Temperance Hotel-keeper, as well as to the banquet or dessert table."—*Good Templar Watchword.*

"I like them exceedingly. They deserve to be entitled 'Nature's Own Beverages'; I could not speak more highly of them."—*Rev. Charles Bullock, B.D., Editor of "Home Words," "Our Own Fireside," &c., &c.*

"They make the most refreshing and delicious beverages extant."—*Henry Munroe, Esq., M.D., F.L.S., Hull.*

"They are excellent. The Lime Fruit Syrup is the pleasantest Preparation of Lime I have yet tasted."—*Dr. F. R. Lees, Leeds.*

"I like them better than anything of the kind I have had before."—*James Barlow, Esq., J.P., Bolton.*

"Miss Robinson is quite willing that Mr. Beckett should publish her opinion that the Syrups he supplies are *by far the best*. All kinds have been supplied at the Soldiers' Institute, Portsmouth."

"I have sold a large quantity of your Fruit Syrups for several years, and have always found them of uniform good quality. At various times I have tried other makers, but have not got any to equal yours. Some I have purchased at cheaper rates, but they were not so economical, being of inferior quality."—*Mr. James Hibberd, Red Star Coffee Tavern, Poole.*

Sold in Bottles, 1s. 9d.; Half-bottles, 1s.

BECKETT'S TONIC DRINKS.

BECKETT'S SYRUP OF ORANGE AND QUININE "is a very good Tonic. I have ordered it to several of my patients, and they all speak very highly of it."—*Dr. Alex. Miller, Edinbro'.*

BECKETT'S SYRUP OF ORANGE AND QUININE. "I have prescribed it as an excellent substitute for Bitter Beer for the last ten years."—*Dr. Norman Kerr, London.*

BECKETT'S SYRUP OF ORANGE AND QUININE promotes the appetite and assists digestion, and at the same time improves the condition of the nervous system. Sold in Bottles, 1/9 and 3/-

EXHILARINE forms a most exhilarating and invigorating beverage by the addition of hot or cold water.

EXHILARINE contains Phosphorus, Iron, Lime, &c. It gives tone to the stomach and strength to the nerves.

EXHILARINE is excellent with gazogenes, makes a fine sparkling beverage, equal to any of the phosphated drinks in the market, at one-fourth the cost. Pints, 2/3; Half-pints, 1/3.

BECKETT'S LIME AND QUININE SYRUP is a warming invigorating tonic and stimulating beverage. It possesses all the medicinal virtues of the Lime Fruit and Quinine in a palatable form. In bottles, 1/3 and 2/3.

BECKETT'S SYRUP OF HOPS is highly recommended as a palatable and refreshing beverage; excellent with Soda Water. In Bottles, 1/3 and 2/3.

SOLE MANUFACTURER—

W. BECKETT, Heywood, Manchester.

Wholesale Agents—Barclay & Sons; Sanger & Sons; Edwards & Sons; Sutton & Co., &c., &c.

A REAL SUMMER LUXURY!!!

RAYNER'S ORIGINAL LIME FRUIT SYRUP.

The Product of the West Indian
Lime Fruit.

In this preparation all the essential qualities of the Fruit are retained in a most palatable form (while the more crude and useless portions are separated), and is highly recommended as being particularly agreeable and wholesome, acting as a corrective to the system, especially where there is a tendency to biliary excess. It is, moreover, admitted by the highest Medical Authorities to possess remarkable antiscorbutic properties. It makes a delicious cooling beverage either for the invalid or the most robust, mixed with Soda, Seltzer, or any of the Aerated Waters, or with cold spring water, it imparts a most grateful and improved flavour, and is suitable either for Children or Adults.

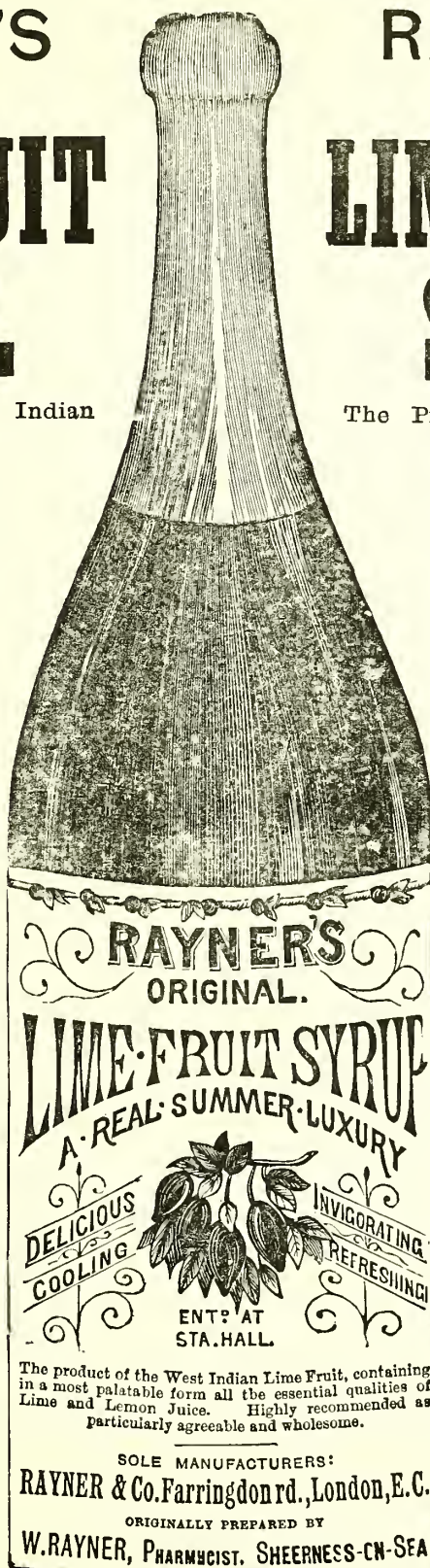
On account of its entire freedom from alcohol it is extensively used in Temperance Hotels, and by the advocates of temperance principles throughout the kingdom.

It is a most wholesome beverage, and suitable for all seasons, and is entirely free from the musty flavour so common to most Lime Juice preparations.

Sold in Champagne Bottles and Half Bottles at 1/6 and 1/- each.

SOLE MANUFACTURERS AND PROPRIETORS,

RAYNER & CO.,
Farringdon Road,
LONDON, E.C.



The product of the West Indian Lime Fruit, containing in a most palatable form all the essential qualities of Lime and Lemon Juice. Highly recommended as particularly agreeable and wholesome.

SOLE MANUFACTURERS:

RAYNER & Co. Farringdon rd., London, E.C.
ORIGINALLY PREPARED BY
W. RAYNER, PHARMICIST. SHEERNESS-ON-SEA

RAYNER'S ORIGINAL LIME FRUIT SYRUP.

The Product of the West Indian
Lime Fruit.

This is now recognised as the best Lime Juice preparation in the market. It is a delicious Syrup, most cooling and refreshing in its character, perfectly divested of the musty flavour so objectionable in these preparations generally, and is entirely free from alcohol. For home or Export Trade it is equally well adapted, as it keeps for any length of time, always gives satisfaction, and commands a large sale wherever it is introduced.

EXTRACT FROM THE
"LANCET," MAY 8, 1880.

"This is not unfairly described on the label as a 'Real Summer Luxury.' The genuine Lime flavour cannot be mistaken. Perfectly bright, it forms an excellent summer drink, either with plain or aerated waters. It is needless to say that such a drink is very wholesome; it is highly popular with children, for whom, as well as for adults, it is very well suited."

SUPPLIED IN BIN CASES
FOR HOME TRADE.

3 doz. 1/- size, 8/- per doz.

2 doz. 1/6 size, 12/- per doz.

Also in Bulk at 5/- per gallon.

Special Quotations to large Buyers.

Export orders executed in Bulk or Bottles, and packed according to the requirements of the market.

SOLE MANUFACTURERS AND PROPRIETORS,

RAYNER & CO.,
Farringdon Road,
LONDON, E.C.

NEW AND IMPORTANT DISCOVERY.

GINGER ALE

FROM PURE JAMAICA GINGER.

The difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour and expense, been thoroughly overcome by

Messrs. HARSTON & CO., of LEEDS,

And they are now able to place before the public a BRIGHT and SPARKLING DRINK, made purely from genuine Ginger Root.



THE ROYAL YORKSHIRE GINGER ALE,
From Pure Jamaica Ginger. Has wonderful nourishing properties.

THE ROYAL YORKSHIRE GINGER ALE.

From Pure Jamaica Ginger. Restores circulation; is warm and comforting.

THE ROYAL YORKSHIRE GINGER ALE

From Pure Jamaica Ginger. Is Non-intoxicating.

THE ROYAL YORKSHIRE GINGER ALE

From Pure Jamaica Ginger. For railway travelling, driving, or exposure to cold.

ABSOLUTELY PURE.

See Analysis by Drs. A. H. HASSALL, M.D., and OTTO HEHNER, F.C.S.

J. H. CUFF'S MINERAL WATERS,

Atkinson St., Deansgate,
MANCHESTER.

ESTABLISHED IN 1801.

SODA WATER (ordinary)

SODA WATER B.P.

SELTZER WATER

LITHIA WATER

POTASS WATER

15 grs., 20 grs., & 30 grs.

(each half-pint)

LITHIA WITH POTASS WATER, &c., &c.,

Supplied in ordinary and half-sized bottles and in syphons.

Cuff's Waters are prepared expressly for a High-class Family Trade.

PRICES MOST REASONABLE.

LIST FREE ON APPLICATION.

CARRIAGE PAID ON FULL GOODS
AND RETURNED EMPTIES.

Cuff's Waters give universal satisfaction to Dealers and Consumers alike. Try them!

HAY'S SOLUBLE OF ESSENCE JAMAICA GINGER

(GUARANTEED PURE AND FREE FROM CAPSICUM)

TRADE PRICE, 5s. per lb.; 12 lbs. and upwards, 4s. 6d.

Highly adapted for the manufacture of *Transparent Aerated Waters*, and for all *Dietetic, Medicinal, and Pharmaceutical Purposes*.

HONOURABLE MENTION,
INTERNATIONAL FOOD EXHIBITION,
AGRICULTURAL HALL, LONDON,
OCTOBER, 1880.

TESTIMONIALS.

"9 Trinity Square, London, S.E.

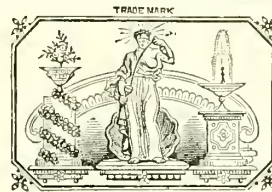
"DEAR SIR,—I think you should make it generally known that your Essence, in water, is the very best vehicle possible for Cod Liver Oil. It conceals its flavour, prevents nausea and eructations, and aids its digestion.

"DANIEL HOOPER, M.D."

"Spring Grove, Upper Norwood, London, S.E.

"DEAR SIR,—I have pleasure in testifying to the excellence of your Soluble Essence of Jamaica Ginger. You have fully overcome the difficulty usually experienced in preserving ginger in combination and in solution with iron tonic mixtures.

EDWARD HAUGHTON, M.D."



THE COMPOUND ESSENCE

(GUARANTEED PURE AND FREE FROM CAPSICUM).

This Essence imparts with the GINGER A PECULIARLY FINE FRUITY FLAVOUR and AROMA.

TRADE PRICE, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.

THE COMPOUND FORTIFIED ESSENCE

Specially adapted for the Manufacture of the FINEST

GINGER ALE.

This Essence imparts the fullest amount of PUNGENCY with the FINE GINGER AROMA and FRUITY FLAVOURS of the LAST-MENTIONED ESSENCE.

TRADE PRICE, 5s. 6d. per lb.; 12 lbs. and upwards, 5s.

HAY'S GINGER ALE ESSENCE

HIGHLY CONCENTRATED.

This Essence is a complete Bouquet of the finest Ginger, Lemon, and other flavours, in a highly concentrated state.

TRADE PRICE, 9s. per lb.; 12 lbs. and upwards, 8s. 6d.

GINGER ALE EXTRACT

Supplies Pungency, Aroma, Colouring and Flavouring.

Price 4s. 6d. per lb.; 12 lbs. and upwards, 4s.

PREPARED BY

W. HAY, MANUFACTURING CHEMIST,
4 REGENT'S TERRACE, HULL.

AGENTS,

Messrs. HEARON, SQUIRE & FRANCIS,
5 COLEMAN STREET, LONDON, E.C.

The LANCET, writing of Bishop's Preparations, says—"Their excellence is well known."

Established 1857.]

BISHOP'S GRANULAR EFFERVESCENT CITRATE OF CAFFEINE.

[Established 1857.]

The Best Remedy for Headache.—Contains One Grain in each Drachm.



CITRATE OF CAFFEINE is now recognised by the medical profession as the safest and surest remedy in cases of nervous or sick headache. In the effervescent form it is more agreeable to the patient, and its remedial action is more prompt. The salts with which it is combined, when in that form, have themselves a tendency to allay any irritation of the stomach.

Dr. BEARD, of New York, in writing of this Salt, says:—"Of the different forms of CAFFEINE I prefer the CITRATE, since it seems to accomplish the desired result with a smaller dose and more surely. When this remedy is given in a dose just adapted to the needs of the sufferer it quickly and perfectly removes the pain in the head and the nausea. I have known it produce this result in less than fifteen minutes.

"The use of CAFFEINE in headache seems to me to be one of the most important of the especial therapeutic advances of our time; it is a genuine and solid reality, the relief it affords being too speedy and too frequent to be accounted for by coincidence or mental influence.

"It is better to give the CITRATE OF CAFFEINE just as the headache is coming on; but it may be given at almost any stage, and when the proper dose is taken it seems to take up pain and bear it away."

An eminent Birmingham physician writes:—"I like the EFFERVESCENT CITRATE OF CAFFEINE prepared by Bishop very much. It is a particularly valuable medicine as a morning restorative; and after brain exhaustion, or where sedentary occupations have reduced the tone of the system, it may be taken with perfect safety and great advantage."

The following are among the medical opinions which have been published respecting BISHOP'S GRANULAR EFFERVESCENT CITRATE OF CAFFEINE:—

The British Medical Journal, Nov. 8, 1879, says:—"We have administered it in nervous headache, and in the *malaise* following an alcoholic debauch, with benefit."

The Medical Times and Gazette, Nov. 22, 1879, says:—"The GRANULAR EFFERVESCENT CITRATE OF CAFFEINE provides a pleasant medicine which has been largely tried, and with no little success, as a remedy for sick headache and other nervous disorders."

BISHOP'S GRANULAR EFFERVESCENT CITRATE OF CAFFEINE is sold in bottles at 2s. 6d. each. With each bottle is supplied a wooden measure cup, which, when filled but not heaped, gives an exact dose. The GRANULAR EFFERVESCENT CITRATE OF CAFFEINE should be taken at the commencement of an attack of headache, and the dose should be repeated in an hour if any pain should remain.

BISHOP'S GRANULAR EFFERVESCENT CITRATE OF POTASH.



Contains eight grains of this admirable anti-febrile salt in each drachm, keeps well, and yields a delicious effervescent draught. It is more efficient, more economical, and more convenient than the ordinary alkaline waters, and much superior to the various mixed powders, which consist mainly of Tartrate of Soda.

A customer writes:—"It is the nicest effervescent preparation I have ever tasted, and is infinitely pleasanter than the bottled waters."

DR. G. O. DREWRY, in his "Common Sense Management of the Stomach," recommends for Indigestion, Constipation, &c., the "GRANULAR EFFERVESCENT CITRATE OF POTASH" as a very agreeable, mild, and cooling laxative, when taken in doses of one dessert spoonful in half-a-pint of water before breakfast.

BISHOP'S GRANULAR EFFERVESCENT MINERAL WATER SALTS.

For the preparation of artificial waters, these Granular Effervescent Salts are especially suitable. They give a refreshing draught, and may be relied on as presenting at the same time the chemical ingredients of the natural waters. It is obvious that in this form the Granular Effervescent preparations present many advantages over the waters themselves. Whilst all the constituents of the natural springs are reproduced, the Salts are extremely portable, more economical, and with them a sparkling refreshing draught is procurable in any quantity at any time. Among the Mineral Water Salts thus prepared may be named, Carlsbad, Kissingen, Pullna, Seltzer, Vichy, Lithia, Friedrichshall, &c., &c. In each case a tea-spoonful of the Salt in a tumbler of water will produce a draught similar in effect to the natural water. The Seltzer Water has been long recognised, both in this country and in Europe, as an excellent tonic and mild aperient. A bottle of the Granular Effervescent preparation of this Salt is a great addition to the dinner-table, as a small draught of the wholesome and refreshing beverage prepared from it, and taken during dinner, is both agreeable and beneficial.

Sold in Bottles at 1s., 1s. 6d., and 2s. 6d. each. Also in larger ones for family use.

BISHOP'S GRANULAR EFFERVESCENT CITRATE OF MAGNESIA.

A perfectly white, and delicately clean preparation, prepared from salts obtained from the Pure Fruit Juices of Lemons and Grapes.



The best chymists in Great Britain and the Colonies keep no other "Granular Effervescent Citrate of Magnesia" than "Bishop's." The reason for this universal preference is that, since its introduction in 1857, it has been found that none of the Imitations of this preparation, originally introduced by Mr. Bishop, have been able to compare with it in reliability as a medicine, or in purity and freshness of flavour as a cooling drink. Full directions on each bottle.

Dr. A. H. HASSALL cautions the profession and the public to select carefully only preparations of known composition and ascertained purity, for there is no class of remedies which is liable to a greater diversity of composition and quality than the effervescent granular preparations; adding that he is able to state further that all constituents entering into the composition of Bishop's several preparations are pure and of excellent quality.

Observe the Name on the Seal, the Registered Trade Mark on the Label, and full address of

ALFRED BISHOP, Manufacturing Chymist,
17 Speck's Fields, Mile End New Town, London.

TRADE NOTICE.—Indentors may procure any of my preparations through Merchants and Shippers, Wholesale Drug and Patent Medicine Vendors, and of the Original Maker. They are bottled in convenient sizes for the use of the purchaser. Each bottle will bear the Name and Trade Mark, and full address of ALFRED BISHOP, Manufacturing Chymist, 17 Speck's Fields, Mile End New Town, LONDON.



LLOYD'S "UNIVERSAL" FOOD

(Patent Cooked Malted Farinaceous),

THE NEW FOOD
FOR INFANTS, CHILDREN, AND ADULTS,
BOTH IN HEALTH AND SICKNESS:
REQUIRES NEITHER BOILING NOR STRAINING.

From the *British Medical Journal*, June 25, 1881:—"This Food has, we find on trial, many recommendations: it is easily digested, and requires no cooking, needing only to be mixed with boiling water or milk. It is highly nutritious, very palatable, and has the merit of being cheap. It makes an excellent supper-dish, and a delicate custard with fruit. It has more nutrition than rice, sago, or tapioca, and makes excellent pudding. As an article of ordinary diet, it is applicable for general use as well as for the special use of invalids and children, for whom it may be made to replace, and often very advantageously, bread and milk and various forms of porridge. It is not artificially sweetened, and is a very excellent food, skilfully devised and well prepared."

This Food consists of the most nutritious and finest-selected cereal grains and pulse, combined with the active constituents of pure fresh malt meal, in such proportions as to render the mixture as nearly as possible chemically identical with the constituents of the human body itself. It is therefore valuable for everyday use, both in health and sickness, and for every condition of life; alike suited to the youngest child, the most robust adult, and the weakest invalid. Being thoroughly cooked, it is quickly and easily made; and being palatable, it is attractive, instead of, as so many foods are, repulsive. It is invaluable in all cases of weak digestion, confirmed indigestion, and constipation.

EXCELLENT for Breakfast.
UNSURPASSED for Supper.
DELICIOUS as Baked Pudding.

NOURISHING as Custard, with
Stewed Fruit of all kinds.
INFANTS thrive Splendidly on it.

CHILDREN grow Strong on it.
ADULTS keep Well on it.
INVALIDS recover on it.

Analytical Report by Professor ATTFIELD, F.R.S., &c., Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, Dec. 16th, 1880.
"I have made a chemical analysis and microscopic examination of LLOYD'S 'UNIVERSAL' Food, a well-mixed and prepared meal. I find it to be a true food, rich in all the elements necessary to the formation of flesh, fat, bone, and muscle, and therefore greatly superior to mere starchy 'foods.' Its elements are in a proper form, in a perfectly cooked form, and in natural proportions. The phosphates present equal fully two per cent. of bone phosphate. The nitrogenous or flesh-forming matter amounts to as much as fifteen per cent. (Signed) JOHN ATTFIELD."

In Tins, at 1s., 2s., 5s., and 10s. each, less usual trade discount, of the Manufacturers,

J. & C. LLOYD & CO., Verulam Street, Gray's Inn Road, LONDON, E.C.

SPECIAL NOTICE & CAUTION.

BRAND & CO.

The Original Manufacturers of Essence of Beef (green label under wrapper), and other Specialities for Invalids, have

NOT REMOVED

From their **SOLE ADDRESS**, No. 11
LITTLE STANHOPE STREET, MAY-
FAIR, W., and caution the trade to

BEWARE of IMITATIONS.

CONTRACTORS TO HER
AND THE



MAJESTY'S GOVERNMENT
INDIAN GOVERNMENT.

THE CONSOLIDATED SOUP AND FOOD CO., 23 CASTLE STREET, FINSBURY, LONDON, E.C.

VALENTIA.

This delicious Food, prepared by our special process after the result of prolonged experiments, we are now enabled to offer to the public at an exceptionally low price. It will be found invaluable for Invalids, as it corrects acidity, cures indigestion, asthma, phlegm, sleeplessness, &c., acts on the liver and kidneys, giving a tone to the stomach, and thereby restoring the appetite and sound health. For delicate infants (when made thin to pass through feeding bottle) it will be found more nutritious than nurse's milk. One pound of this Food contains more wholesome nourishment than 4 pounds of the best beef or mutton.

Sold everywhere in 1-lb. Tins, at 1/6 per lb., sufficient to make 16 Pints.

Wholesale, 12/6 per dozen less usual discount to large buyers.

Berners College of Experimental Science and School of Classical and Technical Education, 44 Berners Street, W., August 20th, 1880.

Berners College of Experimental Science and School of Classical and Technical Education, 44 Berners Street, W., August 20th, 1880.

Analytical Department.

To the CONSOLIDATED FOOD CO., 23 Castle Street, Finsbury, E.C.

Gentlemen.—This is to certify that I have made a careful examination of the "Valentia" Food, and find it an exceedingly nutritious compound, rich in nitrogenous matters, viz., in Lecumen, Albumen, Gluten, &c., combined with an appropriate amount of "Respiratory" Food. It also contains the valuable "Food" Phosphates of Potash and Lime amongst other mineral constituents.

This Food is quite free from any objectionable substance or quality.

EDWARD V. GARDNER, F.A.S., M.S.A.

Professor of Chemistry, late of the Royal Polytechnic Institution.

Wholesale of Messrs. Sanger & Sons, 252 Oxford Street,

To the CONSOLIDATED FOOD CO.—Gentlemen.—I have carefully examined and analysed the "Valentia" Food prepared by you. 100 parts contain:—

Moisture	...	10.00
Soluble Nitrogenous Organic matter, viz., Gluten, Lecumen, and Starchy matters, &c.	...	33.00
Other Nitrogenous Organic substances, viz., Albumen, Fibrine, &c.	...	54.60
Inorganic Constituents, principally Phosphate of Potash and Lime, with Salts of Alkalies	...	2.40
Traces of Soluble Silica	...	100.00

EDWARD V. GARDNER, F.A.S., M.S.A.,

Professor of Chemistry, late of the Royal Polytechnic Institution.

1 Wholesale Druggists and Druggists' Sundrymen.

NESTLE'S MILK FOOD.

THE

"PERFECT FOOD FOR INFANTS."

NESTLE'S MILK FOOD is prepared at Vevey, Switzerland, from the pure milk of Alpine-fed cows, the finest wheaten flour and sugar, combined in exact proportions to imitate closely the natural food for infants. It is thoroughly cooked, and reduced to a fine powder, perfectly soluble in water, requires only the simple addition of water to prepare it for use—in this respect having the advantage over all other foods.

NESTLE'S MILK FOOD is highly recommended by the best medical authorities in all parts of the globe as a perfect diet. Nestle's is the original and genuine Milk Food or Powder. The extensive demand for this Food, its well-known superiority and universal recognition by the medical profession, has produced the inevitable imitations. The Trade and the Public are hereby cautioned. Nestle's Milk Food has stood the test of years. Take no other under any pretence whatever.

NESTLE'S MILK FOOD is put up in Tins, packed in lined cases when ordered specially for the Export Trade. Is highly concentrated, and in a perfectly dry state. Will keep good in any climate.

For exportation the Food is a very desirable article, and is much sought after among people of all nationalities in all parts of the globe. Its advantage as an article for export consists in

Its uniform quality;

Its purity;

The simplicity of its preparation for use;

Its freshness in warm climates, where cow's milk soon becomes tainted.

Foreign and Colonial Importers should obtain their supplies through any Wholesale Firm in Great Britain, or Shipping Agent, thus ensuring fresh stock and lowest prices.

NESTLÉ CONDENSED SWISS MILK.

NESTLE'S SWISS MILK.—Awarded "First Order of Merit" over all competitors, Melbourne Exhibition, 1881.

NESTLE'S SWISS MILK.—More highly concentrated than any other brand.

NESTLE'S SWISS MILK.—As grateful in use as new milk from the cow.

NESTLE'S SWISS MILK.—Creamy, fragrant, rich, pure.

NESTLE'S SWISS MILK.—From Alpine-fed cows. Finest milk-producing country in the world.

NESTLE'S SWISS MILK.—Experts and consumers say, "Best milk in the market."

NESTLE'S MILK FOOD and SWISS MILK.—Sold by Chemists and Grocers everywhere. Wholesale Depot, No. 9 Snow Hill (late 7 Barbican), E.C.



Has been **THOROUGHLY TESTED**, and is in constant demand for export to **INDIA, CHINA, AUSTRALIA**, and the **CAPE**, for use by the **GREAT STEAMSHIP COMPANIES**, and is ordered in Large Quantities by **THE ADMIRALTY, METROPOLITAN ASYLUMS BOARD, &c.**

SPECIAL TERMS TO SHIPPERS. **SAMPLES AND EVERY INFORMATION AT THE LONDON DEPOT,**

9 SNOW HILL, E.C.

GOLD MEDAL, PARIS EXHIBITION, 1878.

FRY'S COCOA EXTRACT.

Guaranteed Pure Cocoa only. A perfectly pure and delicious beverage, prepared exclusively from Choice Cocoa Nibs, with the superfluous oil extracted.

"If properly prepared, there is no nicer or more wholesome preparation of Cocoa."—Food, Water, and Air, Tr. HASSALL.

"It is strictly pure, and well manufactured in every way."—W. W. STODDART, F.I.C., F.C.S., City Analyst, Bristol.

"Pure Cocoa, from which a portion of its oily ingredients has been extracted."—CHAS. A. CAMERON, M.D., F.R.C.S.I., Analyst for Dublin.

TRY ALSO

FRY'S CARACAS COCOA, a delicious preparation

J. S. FRY & SONS, BRISTOL AND LONDON.

ESTABLISHED 1760.

Contains three times the strength of ordinary Breakfast Beverages.

ONCE TRIED ALWAYS USED.

The valuable properties of the Dandelion Root, recognised by eminent Physicians for many centuries, has now become an article of daily use.

Sold by all Chemists throughout the Kingdom in Tins at 1s. 6d., 1s., 9d., and 6d.—Price Lists on application to the Manufacturers,

PHILLIPS & SON,
CASTLE SQUARE, SWANSEA,
AND ARTHUR STREET WEST, LONDON BRIDGE,

OR OF
JAS. WOOLLEY, SON & CO., Manchester. EVANS, SONS & CO., Liverpool, &c.
W. MATHER, Export Agent, London. MAW, SON & THOMPSON, Aldersgate
CLARKE & McMULLAN, Belfast. Street, London.
GOODALL, BACKHOUSE & CO., Leeds. BURGOYNE, BURBIDGES & CYRIAX,
McMAISTER & HODGSON, Dublin. 16 Coleman Street
BARCLAY & SONS, Farringdon Street.

COLONIAL AGENTS.—Melbourne, Adelaide, and Sydney—P. T. FALK; BLYTHIE & CO. New Zealand, Nelson, Canterbury, Auckland—A. SCLANDERS & CO.; E. & A. ISAACS. Adelaide—F. H. FAULDING & CO. Cape, Algoa Bay, East London—L. DREYFUS.

SPECIAL TERMS TO MERCHANTS AND SHIPPERS.



NELSON'S

PURE BEEF TEA

SOLD IN HALF-PINT PACKETS.

Samples and Prices on application to the Manufacturers,
GEORGE NELSON, DALE & Co.,
14, DOWGATE HILL, LONDON, E.C.

Paul Liebe DRESDEN.

Prize Medal at 10 Exhibitions. First Pure Soluble 27s highest reward for Dietetic Preparation. **LIEBE'S SOLUBLE LEGUMINOSE**, sole soluble Flour for Soups; requires no cooking; cheaper than Revalenta, Lentilla, common Leguminese &c.; samples free. — Chocolate with Liebe's Soluble Leguminese Cocoa with id. — **LIEBE-LIEBIG'S SOLUBLE FOOD** for Infants prepared in vacuum upon Baron Liebig's principles. — **LIEBE'S EXTRACT OF MALT**, pure, concentrated, and unfermented; the same with cod liver oil, iron, quinine and iron, lime, hops; lozenges. — **LIEBE'S PEPERINE WINE**, digestive liquor. Export to any climate. Prospectus free on application. — AGENTS—London: F. Newbery & Sons, 1 King Edward Street; A. & M. Zimmermann 21 Mincing Lane; Hitchin: Perks & Dlewellyn.

ZOEDONE.

PRICE:— 6 doz. pints 27s.
per case, 5 cases or upwards
26s. per case, allowing 6s.
for empty cases and bottles.

CENTRAL TRADE AGENCY,

71 QUEEN STREET, E.C.

JOHN FREEMAN & CO.

Delivered free in London, or free on rail for country. Country orders to be accompanied with remittance.

THE CONDY'S FLUID CO.,

7 Falcon Street, London.

BEWARE OF MEAN AND ACTIONABLY FRAUDULENT IMITATIONS OF OUR FIRM AND GENUINE PRIZE MEDAL LABELS, WITH FICTITIOUS ADDRESSES.

Product of a special refining process.

It is Chocolate devoided of its over-richness and substantiality.

Sugarless, and, when made, of the consistence of Coffee.

An afternoon Chocolate.

In packets, 6d. and 1s., and tins, 9d., 1s. 4d., 2s. 8d., 5s., or 7s. 6d. labelled.

JAMES EPPS & CO.,

Homœopathic Chemists,
L O N D O N .

EPPS'S CHOCOLATE ESSENCE.

E. LAZENBY & SON (6 EDWARDS STREET, PORTMAN SQUARE,) Sole Proprietors of the Celebrated Receipts and Manufacturers of the Pickles, Sauces and Condiments so long and favourably distinguished by their name, beg to remind the public that their labels are affixed to the choicest description of goods only, that every article prepared by them is guaranteed as entirely unadulterated and may be obtained of Grocers, Italian Warehousemen and others.

HARVEY'S SAUCE.—CAUTION.—The admirers of this Celebrated Sauce are particularly requested to observe that each bottle bears the well-known label signed "ELIZABETH LAZENBY"; this label is protected by perpetual injunction in Chancery of the 9th July 1858 and without it none can be genuine.

18 TRINITY STREET, LONDON. S.E.

Elizabeth Lazenby

GROUT'S MOTHER'S FRIEND

INFANT'S FOOD WARMER.

FOOD KEPT WARM 12 HOURS WITHOUT ATTENTION

In the Bottles ready for use.

Particulars and Testimonials on application to the Inventor and Manufacturer,

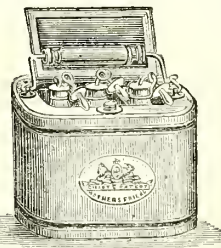
JOHN GROUT, HEREFORD.

Supplied from London Agents—MAW, SON & THOMPSON, Aldersgate Street; LYNCH & Co., Aldersgate Street; and CROWDEN & GARROD, Falcon Square.

RETAIL PRICE LIST.

*Size for Two
Bottles.*

Cloth Cover . 12/-
Bright Tin do. 16/6
Japan'd do. . 18/6
Copper do. . 22/6
Brass do. . . 22/6
Copper interiors,
9/6 extra.



*Size for Three
Bottles.*

Cloth Cover . 14/-
Bright Tin do. 18/6
Japan'd do. . 20/6
Copper do. . 27/6
Brass do. . . 27/6
Copper interiors,
12/- extra.

TURNER'S TARAXACUM OR DANDELION COFFEE IS THE BEST.

Is sold in 6d., 1s., and 2s. Tins only, and each Tin bears the Proprietor's "Registered Trade Mark" on the Wrapper, without which it is not genuine.

TURNER'S DANDELION COFFEE

Is recommended by the Faculty. See Testimonial.

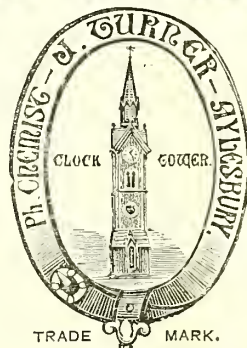
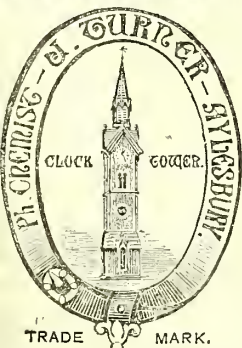
TESTIMONIAL from C. SPENCER, Esq., M.R.C.S., WHITCHURCH.

"Dear Sir,—I have tried your Coffee, like it, and can speak very highly of it.

"Mr. J. Turner."

"Yours truly,

"C. SPENCER."



This Preparation is well got up, gives a good profit, and will only be supplied to one Chemist in each Town.

TERMS ON APPLICATION TO THE PROPRIETOR.

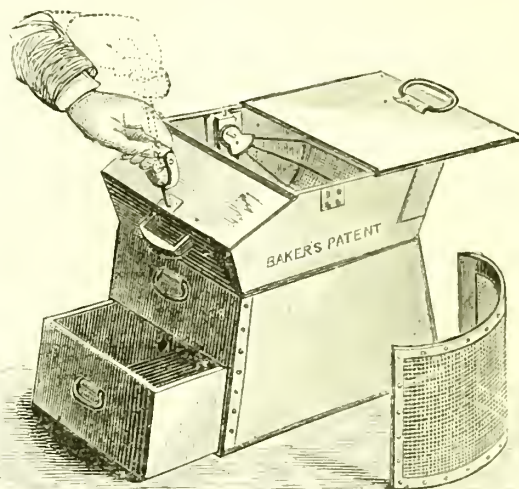
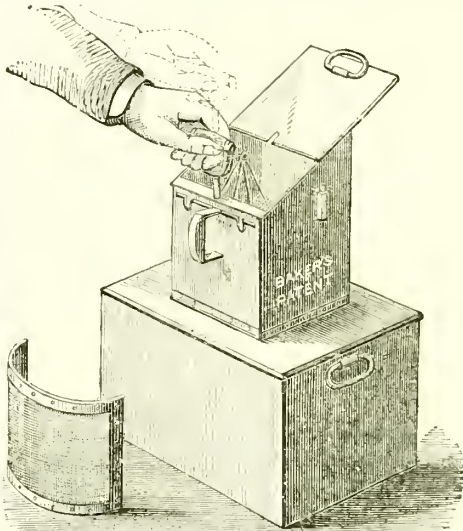
Prepared and Sold by J. TURNER, Pharmaceutist, AYLESBURY.

BAKER'S PATENT SIFTING AND MIXING MACHINES.

Protected by Letters Patent in the United Kingdom of Great Britain and Ireland; France, Belgium, the United States, Canada, &c., none being sent to all parts of the World. Over 10,000 already in use by the Principal Chemists, Druggists, and Manufacturers in the United Kingdom and Abroad.

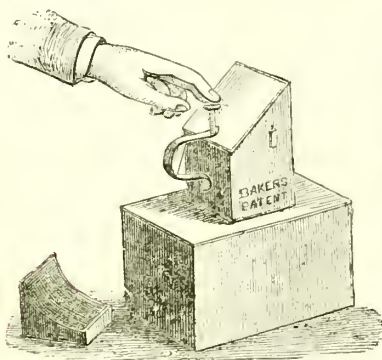
The introduction of these inventions having already been attended with so extensive a sale, and having been adopted by the leading Chemists, Druggists, and Manufacturers both at home and abroad, renders further testimonials to their superiority over any other "Mixers" unnecessary. They are the only machines that combine the advantage of the *finest sieves* with those of a *perfect mixer*. Finer powders and more intimate mixtures being produced than is possible by any other process, while for rapidity of action and the entire avoidance of waste and dust in the operation they stand unrivalled. Since their first introduction, important improvements have been added, both in No. 1 and other sizes, and recently a new patent has been secured for a Combined Crank Action, Hopper and Agitator Mixer Machine. At various meetings of the Pharmaceutical Society, held in London, machines of several sizes have been exhibited and satisfactorily tested. The machines are provided with seven different meshes of sieves, from which a selection of four is *usually* made, forming the "ordinary set." The finer sieves are used for Camphorated Chalk, Violet Powders, Aromatic Powders, Gregory's, Tooth Powders, Dover's Powders, and all finest compounds, while the medium and coarser sieves are used for Sedlitz, Lemon Kall, Sherbet, Baking Powders, Curry Powders, Pill Powders, Horse and Cattle Mixtures, preparing Tinctures, &c. The sieves can be instantly changed for other meshes, and the whole machine taken apart for cleaning.

No. 2.—This machine mixes from 3 to 7 lbs. at a time, and has a receiver holding from 21 to 28 lbs. It is equally adapted for large or small quantities, and is an excellent and valuable medium size.

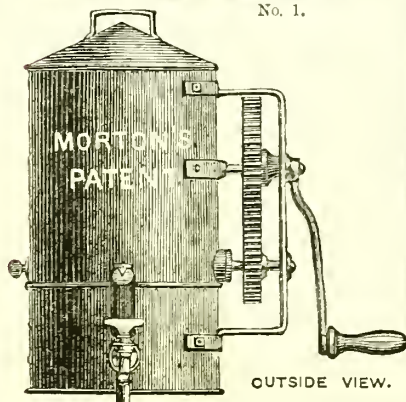


No. 3.—This machine mixes from 14 to 28 lbs. at a time, and is provided with two drawers holding 30 lbs. each; several ext. can be mixed and sifted in a short time when required; it is equally convenient for small quantities. This size is well adapted for wholesale and large retail dealers, and is highly recommended.

No. 1 Machine.—This is a most convenient size for retail chemists; from 1 to 5 lbs. can be mixed and sifted in a few minutes, or when only a few ounces are required it is equally convenient. For dispensing prescriptions, &c., it entirely supersedes the use of pestle and mortar.

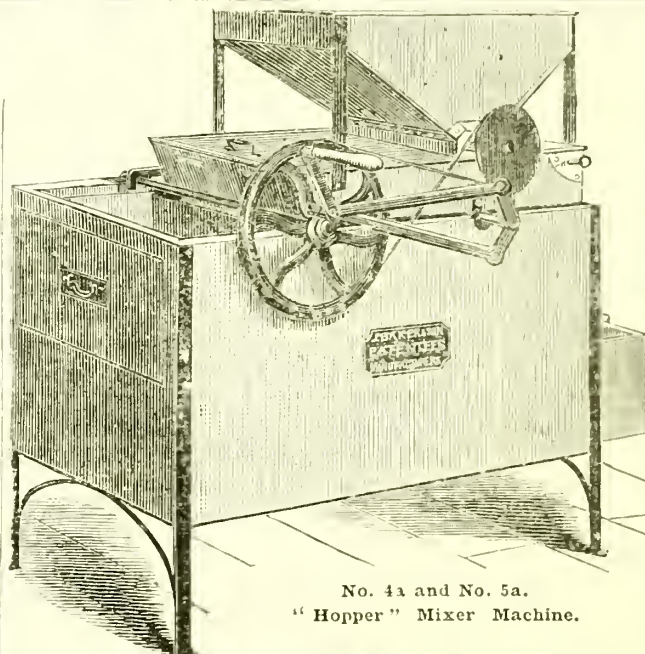


No. 1.



OUTSIDE VIEW.

Steam Sifting Machinery, Drug Mills, Pill Containers, &c., &c.



No. 4a and No. 5a.
"Hopper" Mixer Machine.

No. 5.—This NEW PATENT machine is adapted for the largest wholesale dealers, and is arranged to work by either hand or steam power. It has a crank action, with revolving mixers in the hopper, being also arranged with "Agitator Mixers" and sieves as in the smaller machines. Several tons can be mixed and sifted in this machine in a few hours when required. Smaller sizes are also made on this principle.

THE PHARMACEUTICAL EXHIBITION, 1881. From *The Pharmaceutical Journal*, June 14, 1881.
Messrs. J. Baker's exhibit, besides comprising some of the apparatus shown last year, included the "Hopper" Mixing Machine, of which only a model was exhibited last year. In this apparatus the powders are first thoroughly mixed in the hopper and then supplied as required by adjusting the apparatus to the sifting instrument beneath, any grit or foreign matter separated by the sieve being easily emptied out by a simple contrivance without disturbing either the powder that is being mixed or the powder that has been sifted.

Sole Agents for Morton's Patent Liquid and Compound Mixer. For Pomades, Cold Cream, Ointments, Emulsions, Chemicals, Colours, Inks, Soaps, Sances, Fruit Syrups, &c.

These machines are constructed with a double bottom for the purpose of holding hot water when required; or heating apparatus can be used under them. The mixer working closely to the concave, the ingredients are thus brought from the bottom at each revolution—the only perfect principle for liquid mixing. The machines are closely covered, and easily cleaned, the mixer being removable.

Further Particulars and Price List on application.

JOSEPH BAKER & SON, 14 TABERNACLE WALK, FINSBURY SQUARE, LONDON, E.C.

KORFF'S**PURE CHOCOLATE**Of all the Wholesale Houses, and
E. A. PHILLIPS & CO., 23 GREAT ST. HELEN'S, LONDON, E.C.**POWDER.****LIEBIG'S EXTRACT OF MEAT.**

Prepared according to Baron Liebig's own Instructions.

7 lb. Tins	..	..	49/- each.	1 lb. Jars	..	..	45/- per doz.	2 oz. Jars	..	..	12/4 per doz.
1 lb. Jar	..	..	87/- per doz.	4 oz. do.	..	..	23/3 do.	1 oz. do.	..	..	6/9 do.
Flavoured Extract of Meat, 6d. per lb. less. Solid Essence of Meat, 1 lb. Jars, 4s.; 1/2 lb. Jars, 4s. 3d.; 1/4 lb. Jars, 4s. 6d. per lb.											
6 lb. weight Carriage Paid. Packages Free. Orders of 50 lbs. 7 1/2 per cent. off.											

Also Beef, in 2 lb. tins, at 10/- per doz. Corned Beef, in 2 lb. tins, at 10/6 per doz. Mutton, in 2 lb. tins, at 13/- per doz.

THE AUSTRALIAN (RAMORNIE) MEAT CO., 52 & 53 CRUTCHED FRIARS, LONDON.

NOTE THE PRICE

NOTE THE PRICE

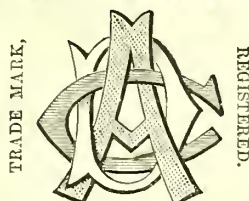
THE PURE FOOD COMPANY'SPreparations and Manufactures of various Articles of Food
of Daily Consumption,Including especially those required by **INVALIDS.****CONCENTRATED BEEF-TEA, &c.****EXTRACT OF COFFEE, &c.**

TRADE MARK.

MILK FOODS, &c., FOR INFANTS,**CHILDREN, AND INVALIDS.**

ALL BEING GUARANTEED OF ABSOLUTE PURITY AND OF THE FINEST QUALITY.

For Price List and further particulars, apply to

THE PURE FOOD COMPANY, 4 PRINCES STREET, RED LION SQUARE, LONDON.**KOUMISS,**

PREPARED BY THE

AYLESBURY DAIRY COMPANY, LIM.

NOTICE.—**KOUMISS** has hitherto been very costly, in fact, the price has prohibited its use except to the wealthy and in very extreme cases. **THE AYLESBURY DAIRY COMPANY** having all the necessary conveniences for its preparation—space, a resident analytical chemist, an unlimited supply of pure milk (more than 3,000 gallons are daily passed through the dairy), and a service of delivery covering all the Western Districts of London, are now able to supply this most valuable beverage at less than one-half the price hitherto charged.

May be obtained from Chemists in nearly all
Provincial Towns.Chemists will be furnished with full particulars as to Prices
and Terms on application to the Secretary,**AYLESBURY DAIRY COMPANY, LIM.,**

31 ST. PETERSBURGH PLACE,

BAYSWATER, LONDON, W.**MUSTARD.****FINCH, RICKMAN & CO.'S****Genuine Qualities**

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

**6 BROKEN WHARF, UPPER THAMES STREET,
LONDON.****CHEMISTS' TEA AGENCY.****WALKER & DALRYMPLE'S Broken-Leaf Tea**

1s. 8d. per lb.

A money-saving tea. Absolutely pure. The small leaf from some of the finest Indian and China Teas. Produces a tea in the cup stronger, richer, and cheaper than most whole-leaf teas. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S Intermediate Tea,

2s. per lb.

BEST at the PRICE EVER SOLD. Great strength, and a most useful tea where there is a large consumption. Recommended to all who wish to save in their tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.

Agents appointed, where unrepresented, throughout the United Kingdom. Prospectus and samples free on application.

Warehouses—154 and 155 Whitechapel Road, London.

P.O.O. payable at Head Office. Bankers—The National Provincial Bank of England.

ROBERT GIBSON,
MEDICATED LOZENGE MANUFACTURER,
CARLTON WORKS,
ERSKINE STREET, HULME, MANCHESTER,
AND
No. 1 AUSTRALIAN AVENUE, LONDON.

ORIGINAL MAKER OF

GIBSON'S CHLORODYNE LOZENGES.

CHLORODYNE JUJUBES.

Glycerine Pastilles. Delectable and Voice Jujubes.

IN DECORATED TINS.

TINS NOT CHARGED.

GIBSON'S ORIGINAL SUGAR WORM CAKES

Have an immense sale, both at home and abroad; will keep in any climate, and give universal satisfaction.

Put up in Tins, containing 3 dozen, 6 dozen, or 12 dozen 1d. Cakes.

GIBSON'S BOILED SUGARS

Have gained a high reputation both at home and abroad. Are made of the best Loaf Sugar, and are equal to, if not surpassing, all others.

PACKED IN CASKS OR CASES FOR EXPORT, DELIVERED FREE ON BOARD.

Carriage paid upon six 4-lb. Bottles to any part of England.

**Gibson's Cough Drops, Lime Fruit Drops, and
Acid Drops, especially recommended.**

THROAT HOSPITAL LOZENGES

(as per T. H. Pharmacopœia).

All Lozenges are sent out in 2-lb. and 4-lb. Bottles (bottles free), but allowed for if returned.

PROPRIETARY LOZENGES carefully prepared, stamped, and cut to any size or shape.

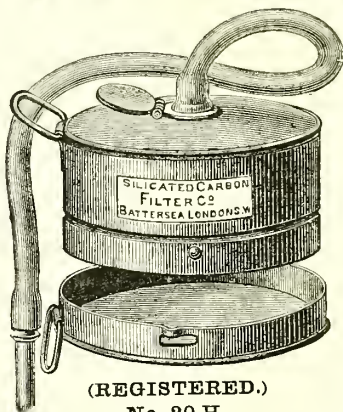
PRICE LISTS SENT ON APPLICATION.

NOVELTY. SILICATED CARBON POCKET FILTER,

IN GERMAN SILVER, NICKEL-PLATED.

Retailed at FIVE SHILLINGS each.

Designed by
MAJOR FRASER,
of the
ROYAL ENGINEERS,
especially
for Officers' Kits.
Weights only 8 ounces.



(REGISTERED.)

No. 20 H.

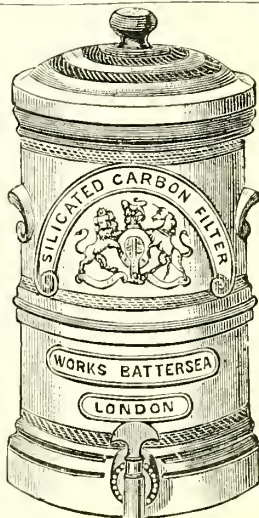
It has been approved
by the
Authorities at the
Horse Guards, and has
been largely
used in the Afghan and
Zulu Expeditions.

Sample sent free by Post on receipt of FOUR SHILLINGS.

DOMESTIC

Made in cream-coloured Stone-ware, fitted with the Silicated Carbon Media, complete with Cover and Silver-plated Tap.

All sizes of this pattern can now be had with Ice Compartment, which renders this Filter the most perfect of Refrigerators.



FILTER, NO. 27.

PRICES.

With Ice Compartment.

No. O, capacity $\frac{1}{2}$ gallon	10s. 6d.
No. A, " 1 "	14s. 6d. ... 17s. 6d.
No. B, " 2 "	21s. 0d. ... 25s. 0d.
No. C, " 4 "	32s. 0d. ... 36s. 0d.
No. D, " 6 "	42s. 0d. ... 48s. 0d.
No. E, " 8 "	52s. 0d. ... 60s. 0d.
No. F, " 12 "	70s. 0d. ... 80s. 0d.

MAIN SUPPLY FILTER, NO. 40.

SPECIALLY ADAPTED FOR
Mansions, Schools, Hospitals, Public
Institutions, Breweries, Distilleries,
Soda Water Manufactories,
Dye Works,

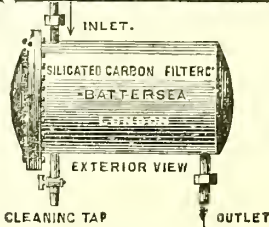
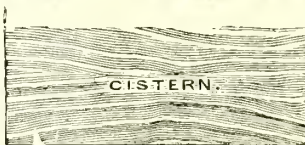
And all other Establishments where large quantities of

PURE WATER

Are required.

The ordinary Sizes kept in Stock are as follows:—

A, $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch pipe	£6 6s.
B 1-inch pipe	£9 9s.
C, $1\frac{1}{2}$ -inch, $1\frac{1}{4}$ -inch pipe	£15 15s.
D, 2-inch pipe	£26 5s.



This Filter is extremely simple in construction, and can be either connected with a Cistern or attached to the Main Service Pipe. It requires no attention beyond an occasional opening of the Cleansing Tap, and will deliver a supply of purified water at a rate of 50 to 1,000 gallons per hour, according to size.

Special Contracts entered into
for Large Works, Institutions,
&c., &c.,

FOR PURIFYING THE WHOLE OF THE WATER SUPPLY OF A BUILDING BEFORE USE.
Ensuring Rapid and Perfect Filtration, at either High or Low Pressure.

SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

SILICATED CARBON FILTERS.

SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

They are readily cleaned from sedimentary matter by merely blowing through the tube, and brushing the surface of the filtering medium.

- A.—Pocket Filter, $\frac{2\frac{1}{2}}$ inches diameter, in porcelain, with glass s. d.
mouthpiece, in decorated metal box 2 6
- B.—Ditto, $3\frac{1}{2}$ inches diameter, in best stoneware 5 0
- Ditto, " with silver-plated tap 7 0
- C.—Emigrant's, 5 inches diameter, with silver-plated tap 12 0
- G.—Pocket Filter, for carrying over shoulder, as supplied to the
Forces in Abyssinia and in Zululand, and to the Ashantee
Expedition 3 6
- H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially
recommended by the Horse Guards for Officers' kits 5 0

TABLE FILTER, NO. 24.

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.
Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.

POROUS TERRA COTTA FILTER, NO. 29

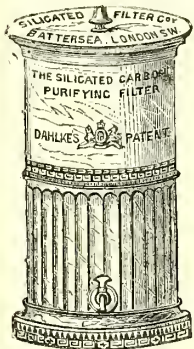
Shape of this Filter as Fig. No. 24.

O, 2s. 6d.; A, 4s.; B, 5s. 6d.

SILICATED CARBON BLOCKS.

2 in., 1s. 6d.; $2\frac{1}{2}$ in., 2s. 6d.; $2\frac{3}{4}$ in., 3s.; 3 in., 4s.; $4\frac{1}{2}$ in., 5s. 6d. ea.

SPECIAL QUOTATIONS FOR QUANTITIES.



DINING-ROOM FILTER, No. 22.

MADE IN MARBLED CHINA.

Size A holds about two gallons; size B, five gallons.

PRICES.

- A 35s.
B 80s.
A, with Ice Compartment 42s.
(New Patent.)
B, with Ice Compartment 100s.
(New Patent.)

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

REFRIGERATOR FILTER, NO. 25.

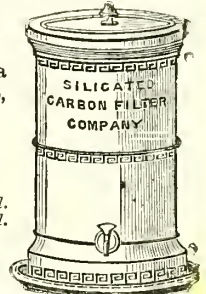
Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A
COOL DRAUGHT OF PURE WATER.

Price, with Silver-plated Tap 31s. 6d.
Ditto, ditto, with Ice Compartment 42s. 0d.
Capacity Two Gallons.

Specially adapted for Tropical Climates.



SILICATED CARBON (Regd.) ASCENSION FILTERS.

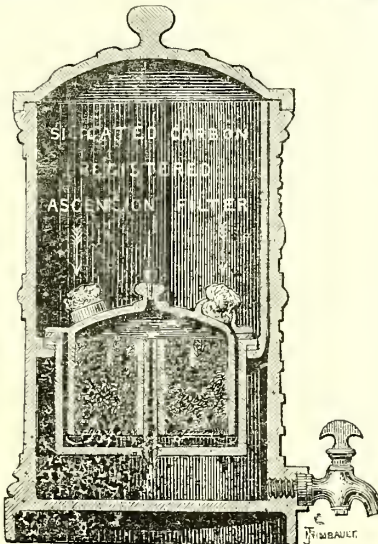
The most
efficient
known
Filter

PRICES:

No. 38.

- 1 Pint, 2/6 ea.
2 " 4/-
3 " 5/6

The Water
passes upwards
through the
Silicated Carbon
in the
direction shown
by the
Arrows in the
Drawings.



NO. 37.

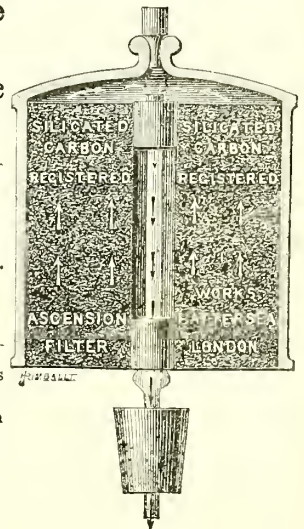
for Table
and
Domestic
Use.

PRICES:

No. 37.

- 1 Gal., 18/- ea.
2 " 26/-
4 " 38/-

The inner blocks
being movable,
by attaching an
indiarubber tube
they can be
converted into
Pocket
or Travelling
Filters.



SECTION OF NO. 38.

WRITE FOR FULL LISTS TO THE

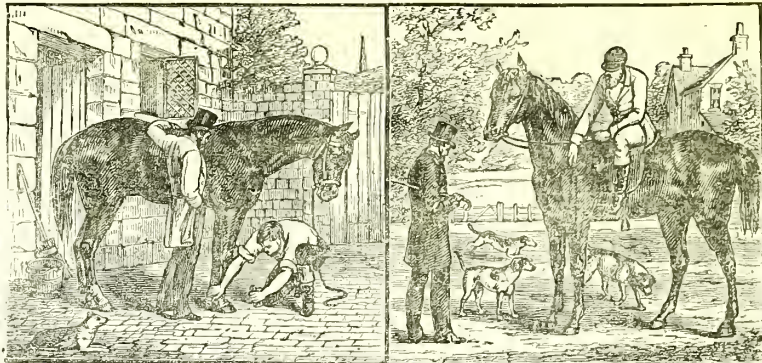
SILICATED CARBON FILTER CO., CHURCH ROAD, BATTERSEA, LONDON.

ELLIMAN'S ROYAL EMBROCATION
IN BOTTLES 2S 2S 6D & 3S 6D EACH

A CERTAIN CURE FOR

Broken Knees,
Sore Backs, Sore Shoulders,
Bruises, Sore Throats,
Influenza,
Windgalls, Lameness,
Chapped Heels,

PREPARED BY ELLIMAN, SONS & CO., STOROUGH.
ELLIMAN'S ROYAL EMBROCATION
is used in most Stands and in a large proportion of the
Stables of the Masters of Stag and Fox Hounds; among
others—the Duke of Rutland; the Earl of Macclesfield;
the Marquis of Huntly; Hon. R. Baillie Hamilton, M.P.;
Lord Middleton; Duke of Buccleuch; Earl of Yarborough;
Earl of Shannon; Earl of Eglinton and Winton; Earl of
Zetland; Earl Percy; the Hon. Ralph Nassau; Viscount
Valentin; J. T. D. Llewellyn, Esq.; A. Erassay, Esq.; J.
B. Booth, Esq.; C. Morrell, Esq.; Capt. R. Tonson Esq.;
Lieut.-Col. Everett.



Lame Hunter. (Trade Mark.) The Royal Hunter Cured.
ELLIMAN'S ROYAL EMBROCATION.

SPRATTS PATENT MEAT "FIBRINE" DOG CAKES & POULTRY MEAL, DOG MEDICINES AND DOG SOAP.

TO CHEMISTS AND DRUGGISTS.

The above Goods have an enormous Sale. For Terms, address—

"SPRATTS PATENT," Bermondsey, S.E., or order through your Wholesale House.

Wholesale Agents for the Soap and Dog Medicines:—Barclay & Sons; Sanger & Sons; Sutton & Co.; F. Newbery & Sons; Lynch & Co., London; Raimes & Co., Edinburgh, York, and Liverpool; Ravensdale Mill Co., Dublin; Woolley, Sons & Co., Manchester; Taylor, Gibson & Co., Newcastle-on-Tyne; Goodall, Backhouse & Co., Leeds; and of all Wholesale Houses.

HORSE, CATTLE, AND SHEEP MEDICINES.



BY ROYAL APPOINTMENT.

DAY, SON & HEWITT,

INVENTORS AND SOLE PROPRIETORS OF THE



"ORIGINAL" STOCK BREEDERS' MEDICINE CHESTS,

For all Disorders in Horses, Cattle, Calves, Sheep, and Lambs.

Patronised for over 40 years by Royalty, and the principal Stock Breeders, Horse Proprietors, and Agriculturists of the British Empire.

The No. 2 MEDICINE CHEST contains the following matchless remedies:—

- "CHEMICAL EXTRACT," for all External Injuries, and Ewes Lambing.
- "GASEOUS FLUID," for Colic, Scour, or Diarrhoea, and Debility.
- "RED DRENCH," for Cleansing Cows and Ewes, and for Inflammation.
- "RED PASTE BALLS," for Mares after Foaling, and Conditioning Horses.
- "BRONCHOLINE," for Husk or Hoose in Sheep, Lambs, and Calves.
- "GASEODYNE," for Heaving and Paining, "CARMINATIVE CHALK," &c.

Price of Chest, with Guide to Farriery, £2 16s. 6d. No. 1 Complete Medicine Chest, in Polished Case, £6 6s.
Horsekeeper's Chest, No. 4, £2 17s. 6d.

CARRIAGE PAID TO ALL PARTS.

Admirably adapted for all ordinary ailments among Stock, and each preparation can be had separately. Full and easy directions enclosed.
Awarded "Certificate of Merit" by the National Agricultural Society of Victoria, Australia, Spring Exhibition, 1871; President's Medal, Spalding Show, July, 1872; Silver Medal, Manchester and Salford Show, November, 1874; Silver Medal, Preston Agricultural Show, June, 1875; Silver Medal, Northamptonshire Agricultural Society, Stamford Show, September, 1875; Silver Medal, Cheshire Agricultural Society, Crewe Show, September, 1875; Special Prize, National Agricultural Society of Victoria, Australia, November, 1875; Medal, Cheshire Agricultural Society, Cheshire Show, 1876; Silver Medal, South African Exhibition, Cape Town, 1877; Silver Medal, Northumberland Agricultural Society, Newcastle-on-Tyne Show, August, 1877; Silver Medal, Knutsford Show, July, 1878; Medal, North Berwick Show, July, 1878; Medal, Dairy Show, London, October, 1878; Silver Medal, Derby, September, 1879; Silver Medal, Wellington, September, 1879; and Medal, Benthams, September, 1880.

CAUTION.—Beware of low-priced Imitations, and see that the name of DAY, SON & HEWITT is on all Bottles and Packets.

Prepared only by **DAY, SON & HEWITT, 22 DORSET STREET, BAKER STREET, LONDON, W.**

And sold by Messrs. Burgoyne, Burbidges & Co., Barclay & Sons, W. Edwards, Newbery & Sons, Sanger & Sons, and all Wholesale Druggists, in London; Hood & Co., Melbourne; Kempthorne, Prosser & Co., Dunedin and Auckland; Fairthorne & Co., Launceston.

By Appointment to H.R.H.

B I G G ' S

the late Prince Consort.

SHEEP AND LAMB DIPPING COMPOSITION,*For Destruction of Ticks, Lice, &c., and Prevention of Fly.***HAS NOW BEEN USED WITH GREATEST SUCCESS FOR NEARLY HALF A CENTURY.**

PAMPHLETS ON APPLICATION.

LEICESTER HOUSE, GREAT DOVER ST., BOROUGH, LONDON.

In any Town where no Agent exists Chemists are requested to apply.

WHOLESALE AGENTS FOR CANADA AND UNITED STATES—

Sugden Evans & Co., Montreal, Canada, and Rouse's Point, New York.

ESTABLISHED A QUARTER OF A CENTURY.

AWARDED 53 GOLD AND SILVER MEDALS BY VARIOUS AGRICULTURAL SOCIETIES.

TIPPER'S MEDICATED POWDERS,

Specially prepared for Horses, Cows, Pigs, Sheep, and Poultry. They surpass anything ever introduced, preserve health, strength, and condition, cure Coughs, Colds, Worms, &c., and are the best known preventives of disease. Will keep in any climate. Sold in 1s., 4s., 12s., and 24s. Canisters.

TIPPER'S DOG (MEAT) BISCUITS,

Keep Dogs in good condition and free from disease.

TIPPER'S LACTEAL COMPOUND,

For rearing Calves without Milk, and improving their condition.

*These are the only preparations of the kind manufactured by a qualified Veterinary Surgeon.***B. C. TIPPER & SON, M.R.C.V.S., BALSALL HEATH, BIRMINGHAM.****GRAVEN'S VERMIN POISON,**

For the effectual Destruction of RATS and MICE.

*Guaranteed Second to None. Sale Increasing Daily.***USE GRAVEN'S VERMIN POISON,**

For the efficacy of which numerous Testimonials have been received. Sample Packets Post Free. Prices, 2d., 3d., 6d., and 1s.—1s., 1s. 6d., 3s., and 6s. per dozen. Carriage Paid. Counter Bills.

F. CRAVEN, Chemist, Batley Carr.**MORGAN'S PATENT CRUCIBLES**

HAVE RECEIVED AT EACH EXHIBITION the HIGHEST AWARD made for CRUCIBLES. The quality is uniform, withstanding the greatest heat without danger, and they never crack. Porous Battery Cells, &c., are manufactured by

THE PATENT PLUMBAGO CRUCIBLE COMPANY,

BATTERSEA WORKS, LONDON, S.W.

TRADE MARK.

THE

Cheapest **of All.****CONDY'S FLUID RED (with Original Prize Medal Labels).**

LONDON, 1862.

1s. size, 4s. per doz.**2s. „ 8s. „****4s. „ 16s. „**

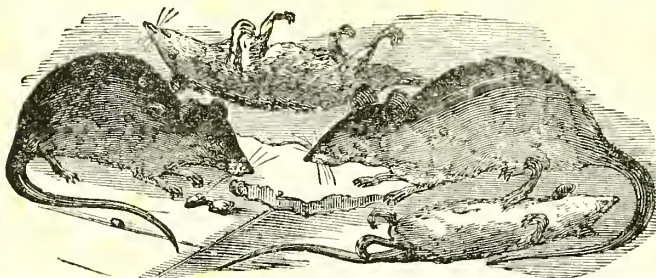
PARIS, 1867.

CONDY'S OZONISED WATER (for Toilet purposes).**2s. size, 8s. per doz. 3s. 6d. size, 16s. per doz.***All Wholesale Houses supply our Genuine Articles at our REDUCED PRICES.***Order R. CONDY & CO.'S Fluid and insist on being charged our REDUCED PRICES.**

ADDRESS FOR ORDERS—

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BATTLE'S VERMIN KILLER. { Mice eat it readily, and Die on the spot.



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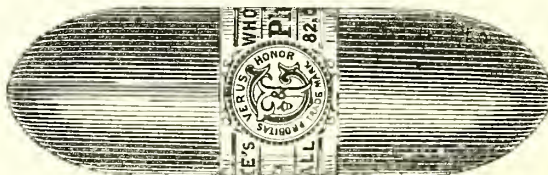
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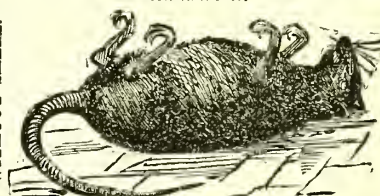
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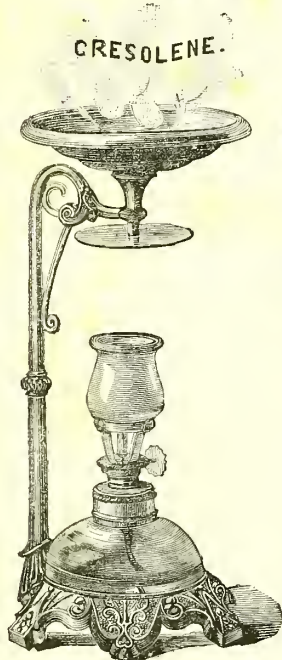
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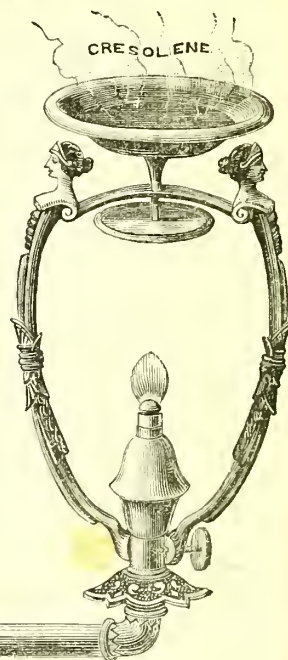
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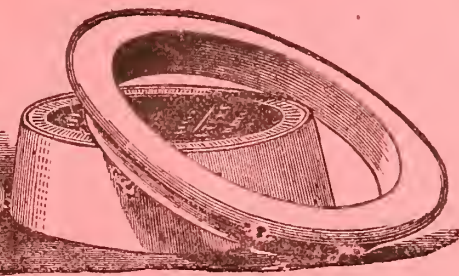
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Wholesale Trade Price 6d., 36s.: 1s., 72s. gross.

Every bottle hermetically sealed. No heating required, unless preferred.

TO VENDORS.

Heavy Costs and Damages have been awarded in all actions
tried for selling Colourable Imitations. To secure the genuine
article please order of your Wholesale House, "BOND'S (Daughter
of the late John) CRYSTAL PALACE INK."

[PLEASE TURN OVER.]

BY ROYAL



LETTERS PATENT.

What's this? BOND'S (Daughter of the late John) RED RIDING HOOD FEEDING BOTTLE
No Leakage. No Wet, Sour Beds, or Linen. No Slipping out of Cork. Contents of bottle
cannot possibly escape.—Retail 1s.

By Royal  Letters Patent.

WHAT'S THIS?
A NEW FEEDER!
BOND'S (Daughter of the late John,
RED RIDING HOOD
FEEDING BOTTLE.

No Leakage. No Wet, Sour Beds, or
Linen. No Slipping out of Cork. Con-
tents of bottle cannot possibly escape.

Retail 1s.

COUNTER SHOW CASES.

Wholesale Trade Price.

- No. 1 Case contains Half-dozen 1s. Crystal
Palace Pedestal Ink; One Dozen 1s. Ink, in Blue
Wrapper; Three Dozen 6d. Ink, Old Style,
White Oval Label. Blue Wrapper 13s. 9d.
- No. 2 Case contains Three Dozen 1s. Ink,
Old Style, White Oval Label, Blue Wrapper 16s. 0s.
- No. 3 Case contains One Dozen 1s. Ink, in
Blue Wrapper; Two Dozen 6d. Ink, in Blue
Wrapper 11s. 0s.
- No. 4 Case contains Three Dozen 6d. Ink
in Blue Wrapper 8s. 6d.

Three Awards in 1 Year.
(Sydney, Queensland, & Melbourne).

BOND'S

Three Awards in 1 Year.
(Sydney, Queensland, & Melbourne).

CRYSTAL PALACE
GOLD MEDAL.

MARKING INK,

(Prepared by the Daughter of the late John Bond).

The Only Gold Medal Marking Ink. 3 Gold, 6 Silver, and other Medals awarded.

CAUTION TO WHOLESALE AND RETAIL VENDORS.



HICKISSON v. ASHTON.
Defendant moved for a NEW TRIAL.
Application REFUSED.
This action, which was brought for the alleged infringement of the Plaintiff's Trade Mark, was tried at the last sittings at Guildhall, before Mr. Baron Cleasby, when the verdict was for the Plaintiff with damages.
The PLAINTIFF was the HUSBAND of the DAUGHTER of the late JOHN BOND, the PROPRIETOR of BOND'S CRYSTAL PALACE MARKING INK. The Defendant was a Druggist, and he had sold a Marking Ink Manufactured by a Mr. Murphy, and the Plaintiff complained that the Labels on Murphy's Ink were an infringement on his Labels. A TRADE MARK is not only a SYMBOL or CHARACTER, but the general appearance of a Label, whereby the public would be deceived.
Their Lordships this morning after consulting Mr. Baron Cleasby on the matter, refused the rule, that learned judge having expressed his satisfaction with the verdict—RULE REFUSED.
Vide daily papers.



"HICKISSON & ANOTHER v. MURPHY." | "HICKISSON & ANOTHER v. MURPHY." | "HICKISSON & ANOTHER v. MURPHY."
Judgment was given for Plaintiffs, with Damages and Costs, and a Perpetual Injunction granted, restraining the said Mrs. Murphy and her Agents from using the word "Bond" upon any Labels or Pedestals manufactured by or for her, or from in any way representing the Ink manufactured by her to be Bond's Marking Ink.

WHOLESALE TRADE TERMS:

Blue Wrapper Ink, 6d., 30s. ; 1s., 60s. per gross Pedestals, 6d., 32s. ; 1s., 72s. per gross.

GIVEN AWAY
AN ATTRACTIVE AND NOVEL GOLD SHOWCARD,

With Inks affixed and so constructed, that it can be either suspended in the Window, or used as a counter card. Quite a Novelty; or a

TRANSPARENT LID BOX OF NEW DESIGN.

Please order at once and show the Public that you keep the Genuine and old Advertised Article.

By exposing a Card or Box in Window and on Counter, we find sale considerably increased.

[FOR PARTICULARS OF MANUFACTURES, SEE OTHER SIDE.]

BY ROYAL

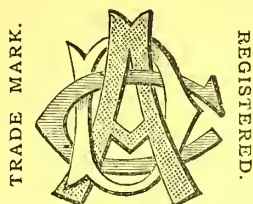


LETTERS PATENT.

What's this? BOND'S (Daughter of the late John) RED RIDING HOOD FEEDING BOTTLE.
No Leakage. No Wet, Sour Beds, or Linen. No Slipping out of Cork. Contents of bottle cannot possibly escape.—Retail 1s.

By Royal Letters Patent What's this? BOND'S (Daughter of the) RED RIDING HOOD FEEDING BOTTLE

KOUMISS.



PREPARED BY THE AYLESBURY DAIRY COMPANY, LIMITED.

KOUMISS is already known to the Medical Profession as a highly Refreshing Effervescent Preparation of Milk, obtained by a natural process of fermentation, of which the chief qualities are:—

- (1) Its agreeable, refreshing and highly digestible character.
- (2) Its attested and rare powers of nutrition in the most desperate cases of Emaciation, Chronic Vomiting, Dyspepsia from all causes, Gastric pain and Irritability, and of Debility following Acute, or accompanying Chronic, diseases.
- (3) Its remarkable success in allaying vomiting and gastralgia and in restoring the nutrition.
- (4) Its great value as a beverage for daily use, both for children and adults—especially to persons who cannot possibly take Milk. To the bilious it is an immense boon.

KOUMISS is a form of Milk in which the albumen and casein are partially digested by a natural process, while its abundance of free carbonic acid makes it sedative to the most irritable stomach, so that it has succeeded in numerous cases recorded by medical practitioners where stimulants, beef-tea, and rectal enemata, aided by the most varied pharmacopœial treatment had alike failed.

KOUMISS has a pleasant slightly sub-acid flavour.

NOTICE.—KOUMISS has hitherto been very costly, in fact, the price has prohibited its use except to the wealthy, and in very extreme cases. THE AYLESBURY DAIRY COMPANY having all the necessary conveniences for its preparation—space, a resident analytical chemist, and an unlimited supply of pure milk, (more than 3,000 gallons are daily passed through the Dairy,) are now able to produce this most valuable beverage at less than one-half the price hitherto charged.

May be obtained from THE AYLESBURY DAIRY COMPANY direct, and from all Chemists in Town and Country. Chemists will be furnished with full Particulars and Terms on application to THE SECRETARY, AYLESBURY DAIRY COMPANY, LIMITED, 31, St. Petersburg Place, Bayswater, London, W.

Small convenient taps for drawing off the Koumiss are supplied at the cost price of 2s. 6d. each. *These are absolutely necessary*, as otherwise the Koumiss will escape on the removal of the cork. They are very simple and durable, and will be found useful for all Effervescing Drinks.

Among the very numerous testimonies to the value of Koumiss a few may be cited:—

NORMAN McCASKIE, M.B., C.M. Edin., Great Ouseburn, reports a case of chronic vomiting, the result of gastric catarrh in an anæmic young lady. Nourishment of any kind had been rejected as soon as taken, and all the usual remedies tried without good effect. The patient was kept alive by rectal enemata, and wineglass-full doses of Koumiss were given every half hour at first and the quantity gradually increased. At the end of the third day the sickness had ceased, and the patient made steady recovery.

Dr. C. G. WORKMAN, Teignmouth, reports two cases of obstinate vomiting successfully treated by Koumiss. In the one, violent sickness had been ineffectually treated by hydrocyanic acid, bismuth, &c. The stomach retained small quantities of Koumiss, and from this time the patient gradually mended.

Dr. LLEWELYN THOMAS writes, "Koumiss is a remedial agent and a form of nourishment almost certain to be assimilated in what otherwise might be considered to be hopeless cases. In phthisis, where capriciousness of appetite and disinclination for food is a prominent symptom, and in the laryngeal form of discase, we possess in Koumiss an agreeable and efficacious form of nourishment. In cancer of the stomach or rectum, in the vomiting of pregnancy, in mesenteric disease, in affections of the throat, accompanied by dysphagia, in gastric catarrh or gastric ulceration, Koumiss I find valuable as a remedy and as food. Some patients may consider that it is a somewhat expensive medicine—(the objection is now removed, see Price List.)—but if it be explained that it is also food, and that it is certainly cheaper than wine, this objection is readily overcome."

Dr. JAMES THOMPSON, M.D., Leamington, speaking as to the great value of Koumiss as a food in disease accompanied by wasting as a symptom, reports that "In phthisical cases, in the marasmus of infants, in severe dyspepsia, and in emaciation from old age and from confinement, Koumiss produced rapid improvement in a series of cases which came under his notice." He states, "The improvement is rapid and permanent, and in most cases the Koumiss is taken with great relish. I have several times heard a patient say that a glass of Koumiss was more supporting than a glass of old port wine."

MEETING OF BRITISH MEDICAL ASSOCIATION AT CORK (REPORT IN *British Medical Journal*).—

"Where all other food is rejected by the stomach, Koumiss is even relished, and from the diuretic effects of Koumiss, it is especially available in cases of acute nephritis, in hypercæmia, hæmaturia, etc., affording hope even in several desperate cases, in which the use of Koumiss has been effectual in saving life. In small pox and scarlet and typhoid fevers, where similar conditions exist, equally beneficial results had been obtained. The great diuretic power of Koumiss, together with its easy digestibility and nourishing properties, render it available and useful even in the most hopeless cases."

Dr. A. S. MYRTLE, Harrowgate, reports in *The Lancet* four cases—one of obstinate vomiting, with marasmus, in the adult; one of uterine disease, with vomiting; one of advanced phthisis; and one of severe vomiting in rheumatic fever—all successfully treated with Koumiss.

MR. CARTER WIGG, of South Minster, reports in *The Lancet* cases of heart disease and albuminuric vomiting successfully treated by a diet of Koumiss.

Dr. RICHARD LOWTHER reports in the *Lancet* a series of cases, in which he treated obstinate sickness by Koumiss with success. He believes that we possess in Koumiss a simple but satisfactory remedy, and one likely to be of use when others fail. The cases reported by him include sickness in phthisis, hæmatemesis and persistent vomiting, due probably to gastric ulcer; severe and chronic vomiting connected with a mental shock, vomiting of pregnancy, and vomiting from stricture of the colon; in all these cases brandy, beef-tea, and a variety of sedative medicines had been employed without effect. Koumiss was quickly successful.

In a case of vomiting from uterine fibrosis in a lady aged sixty, all other remedies having been tried in vain, Dr. Workman says, "in fear she would sink from exhaustion and as a last resource, I determined to give Koumiss a trial. It was given in very small quantities, and from that time sickness abated and gradually stopped." Dr. Workman adds that he has used Koumiss in several cases of phthisis, even in its advanced stage, and found it grateful to the patient and easily assimilated, one during the last days of her life took it quite greedily, drinking three bottles a day.

K O U M I S S .

As a table luxury and daily dietetic beverage, now for the first time brought within the reach of all, KOUMISS has attractions and recommendations which have already obtained for it great favour, and promise general popularity. Its attractions are its delicate piquant flavour, its refreshing effervescence, the pleasure which it gives as a creamy milk beverage, agreeable to the palate and pleasing to the eye. Its merits are the invaluable qualities of high digestibility and unrivalled nutritive power. To persons of delicate and fastidious digestion, the bilious, the gouty, the rheumatic, and to those otherwise unable to take draughts of Milk, KOUMISS offers itself as the type of a beverage which is at once delicious, digestible, and nourishing beyond any other known drink.

J. J. H. BARTLETT, M.R.C.S., L.R.C.P., L.S.A., writes :—

“THE AYLESBURY DAIRY COMPANY, LIMITED,

“I have taken your KOUMISS most regularly, and with very good results. I have had no sickness, and during a very sharp relapse of my fever it was a great comfort. I don't think it is as nutritious as the Peptonized Milk, but *infinitely pleasanter*. The great thing in the AYLESBURY DAIRY COMPANY'S KOUMISS *is its daily delivery in a drinkable condition*.”

K O U M I S S AS A SOLE ARTICLE OF DIET.

Dr. H. Sutherland brought forward recently, at the Clinical Society, a case of obstinate vomiting, in which no food but KOUMISS was taken for Eighteen Months. The patient increased in weight. The daily ration was two pints of KOUMISS.

K O U M I S S IN INFANTILE DIARRHŒA.

In the greenish discharges we have reason to attribute the cause to indigestion of sugar, and it follows that both sugar, and sugar-containing food should be entirely eliminated from the dietary in such cases. As a diet KOUMISS is said to be unexcelled. The original source of this article is Tartary, where it is prepared from mare's milk; it may, however, be made of almost as good a quality from the milk of the cow. In it the sugar has undergone that change which the stomach, in these cases of intestinal trouble referred to, fails to accomplish.”—*Therapeutic Gazette*.

2nd April, 1881.

ROYSTON HOUSE, RICHMOND ROAD, KEW.

THE AYLESBURY DAIRY COMPANY have taken a wise step, and a step in advance, in founding a Chemical Laboratory on their Bayswater premises. It is not merely a laboratory where, under their accomplished Chemist, Dr. VIETH, the daily milk supplies can be properly analysed by the newest and best methods, but it is intended for inquiry and experimental research into all matters connected with the chemistry of milk and milk products, and from personal inspection I can say that the new milk laboratory is planned, fitted, and conducted in such a complete, judicious, and liberal way as to be certain to confer very large benefits upon science and agriculture, as well as upon the public generally.

A. H. CHURCH, M.A. OXON., F.C.S., F.I.C.

*Professor of Chemistry at the Royal Academy.
Referee for the National Food Collection.
For many years Professor of Chemistry at the
Royal Agricultural College, Cirencester.*

LABORATORY, 79, GT. TOWER STREET,
LONDON, E.C.

I can testify as the result of personal inspection that the Chemical Laboratory established by THE AYLESBURY DAIRY COMPANY at Bayswater is completely fitted with every requirement for the accurate analyses of Milk, Butter, and other kinds of Dairy Produce, and that the daily analyses, which are being made there by Dr. VIETH, are not only providing ample tests of the quality and purity of the Milk supplied by the Company, but are accumulating a large amount of valuable information as to milk products and the feeding of Dairy Cattle.

G. W. WIGNER, F.C.S., F.I.C.

From "The Standard," June 6th, 1881.

"In order to encourage liberal feeding, and hence the production of milk of a higher standard of quality, the Company have instituted a system of prizes, consisting of valuable pieces of silver plate, to be awarded annually to those farmers who send the best milk. In order to entitle themselves to compete, farmers are obliged each month to fill in a form stating, together with other particulars, the description and quantities of the food used; and the details thus placed at the disposal of the Company, added to the result of the daily analyses of the milk from each farm, afford very valuable information. It was at the suggestion of the managing director of the Company, Mr. G. MANDER ALLENDER, that the laboratory and these investigations have been instituted, and he is confident that the result will be to raise the average quality of the milk to a total well over 13 per cent. It is possible that in speaking of the 'solids' of milk, the importance of the subject may not be apparent to the general reader, and some explanation may be necessary. In every hundred parts of milk, there must, of course, be a certain percentage of solids which remain after evaporating the milk to a condition of dryness, and it is the greater or less percentage of these solids that constitutes rich or poor milk. The percentage at which milk passes the public analyst as unadulterated is, it has been stated, 11.5. The comparatively enormous profits that arise from reducing it to this standard may easily be reckoned, and those dealers who are content to make their profits on the best milk, containing a percentage over the regulation mark, are making a valuable concession which, in the course of a short time, mounts to something enormous."

COX'S TASTELESS PILLS.



BY ROYAL LETTERS PATENT



Dated and Sealed April 13th, 1854.

Surgeons and Chemists supplied with an excellent Aperient Pill (the formulæ for which will be forwarded), covered with a thin, non-metallic film, rendering each Pill perfectly tasteless, at 1s. a gross. Postage free.

Any formulæ dispensed and covered, and samples, with list of pills, from 500 different forms, which are kept in stock, and will be forwarded free on application.

They were introduced to the medical profession by the present proprietors a quarter of a century ago, and many thousands of unsolicited testimonials have been received from the highest medical authorities, and are now used, and have been used for many years past, by the largest and best conducted hospitals and dispensaries. Of course, a success like this has led to many imitations, and highly varnished pills, made to resemble ours, have been introduced by some unscrupulous people. Many of these pills pass through the stomach unaltered, and a useful invention is thus likely to be brought into disrepute.

The most impudent assertions are made by some of these people who combine in one incongruous whole, the trades of druggists' sundrymen, retail druggists, soap-makers, and horse and cattle dealers.

We make and sell nothing but pills, and have testimonials from regular customers, residing in China, Australia, and every part of the civilised world, as well as from friends in almost every town and village in the kingdom; and our trade, which is constantly increasing, is perhaps four or five times as large as all the rest of our copyists put together.

The following are some of our Prices **FOR CHEMISTS ONLY**:-

We strongly recommend our Aperient Pill, as a good general saleable Pill. These, with the Pharmacopœia Pills quoted below, are sent out to every part of the United Kingdom in half-pound parcels, package, postage and carriage free, on the same day as the order is received; and, to avoid booking and other expenses, 1d. in the Shilling will be allowed if Stamps or P.O.O. are remitted with order.

Any Pills can also be obtained from any Wholesale Druggist. In ordering, please specify "Cox's TASTELESS PILLS."

QUOTATIONS FOR OTHER PILLS ON APPLICATION.

No. in Catalogue.	Pil. Aperients et Cathartie.	Prices per Pound in Four or Five Grain Pills.		No. in Catalogue.	Pills of the British Pharmacopœia.	Prices per Pound in Four or Five Grain Pills.	
		Coated.	Uncoated.			Coated.	Uncoated.
1 & 2	Pil. Aper (Cox) c. Cal.....	6/	5/	122	Pil. Assafœtidæ Co.	6/6	5/6
3 & 4	" (Cox) sine Cal.....	6/	5/	66	" Cambog. Co.	6/	5/
193	" Cathartic Fort. (Cox)	6/	5/	24	" Coloc. Co.	16/	15/
332	" Cochia	5/	4/	30	" " et Hyos.....	16/	15/
				62	" Ferri Carb.	5/	4/
				71	" Hydrarg	5/	4/
				92	" " Subchlor. Co.....	6/6	5/6
				77	" Ipecac. c. Scillæ	7/	6/
				99	" Plumbi. c. Opio	12/	11/
				104	" Rhei Co.	7/	6/
				119	" Saponis Co.	12/	11/
				321	" Scammon Co.	22/	21/
				115	" Scillæ Co.	5/	4/
	PILLS OF THE BRITISH PHARMACOPŒIA.						
6	Pil. Aloes. Barb.....	6/	5/				
8	" " et Assafœtidæ.....	5/	4/				
9	" " et Ferri	5/	4/				
10	" " et Myrrh	12/	11/				
7	" " Soc.	6/6	5/6				

The Registrar of Trade Marks (after giving the usual public notice, prescribed by Parliament, to allow of opposition) has granted us the above "Trade Mark," thus officially recognising us as the "Original Makers of Tasteless Pills," and no Pills will be sent out without this Mark on all bottles or packages.



ARTHUR H. COX & CO.,

Tasteless Pill Manufacturers,

ST. MARTIN'S PLACE, BRIGHTON.



COBDEN'S

QUININE

AND

PHOSPHORUS PILLS.

2s. 9d. & 4s. 6d.

IMPORTANT TESTIMONIAL.

J. G. BOUCHER, Esq., Justice of the Peace, Hoddesdon, writes January 19th, 1881. I find Cobden's Pills have done me much good, for Nervous Exhaustion. I had previously been under the treatment of Sir W. GULL.

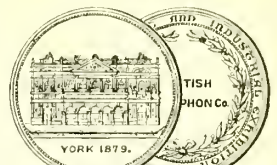
Bills with Name & Address on application to the
SUSSEX DRUG COMPANY,
135, Queen's Road, BRIGHTON.

HIGHEST AWARD,
GOLD MEDAL,

SYDNEY, 1879

HIGHEST AWARD, THE MELBOURNE, 1880-1. BRITISH SYPHON MANUFACTORY,

EUGSTER & KOERTGEN, Proprietors.

OFFICES: 2 GRESHAM BLDGS., BASINGHALL ST., E.C. } LONDON.
Works: 6½ & 7 Wickham Street, Lambeth, S.E. }PRIZE MEDAL,
FINE ART AND INDUSTRIAL
EXHIBITION,

YORK, 1879.

SPECIMEN OF TRADE MARK ENGRAVED ON THE GLASS.

**SYPHONS.**

SHORT LEVERS 22/6 } per doz.
LONG " 24/ } net.
White, Blue, Amber, or Green Bottles—
Cylindrical or Oval shaped,
Silver Plated from 8/ per doz. extra.

Name stamped on metal tops, free for
orders of one gross.Name and Trade Mark en-
graved on the Bottles by the
Acid Process, from 1½d. to 2½d.
each extra.

Each Seltzogene and Syphon thoroughly tested before sent out.
ALL METAL WARRANTED FREE FROM LEAD.

SODA WATER MACHINERY.

NEW and IMPROVED CONTINUOUS APPARATUS,
with One or Two Pumps.
GENERATORS, WASHING VESSELS. GASOMETERS, ETC.
SYPHON FILLING MACHINES £5 10 0
SYRUP DOSING MACHINES 7 10 0
SYPHON FILLERS and SYRUPERS COMBINED 10 15 0

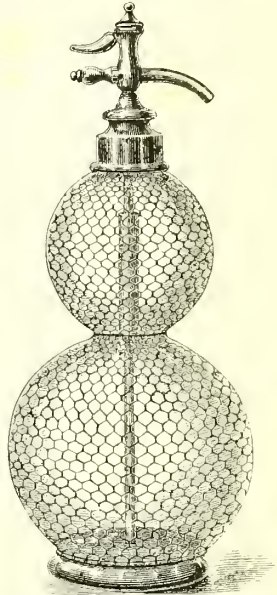
ESTIMATES ON APPLICATION.

SELTZOGENES.

WIRE. CANE.
3 pint size.... 13/ 3 pint size.... 13/6
5 " 18/ 5 " 19/
8 " 30/ 5 " 19/
SILVER PLATED TOP, 5/ extra.
" WIRE, 5/
Drip Catchers of various patterns.
Liberal Discount for Quantities.

IMPORTANT.

In ordering Seltzogenes distinctly state
that you require the "LION
and SHIELD" brand, and see
that you get it, as all our ap-
paratus are stamped thus  and
guaranteed PERFECT
and of first-class workman-
ship.

**CELEBRATED****D. FÈVRE SELTZOGÈNES & POWDERS**

For immediate production of Soda Water, Eau de Vichy,
Sparkling Lemonade, and Aerated Wines.

D. FÈVRE, 398 RUE ST. HONORÉ, PARIS,

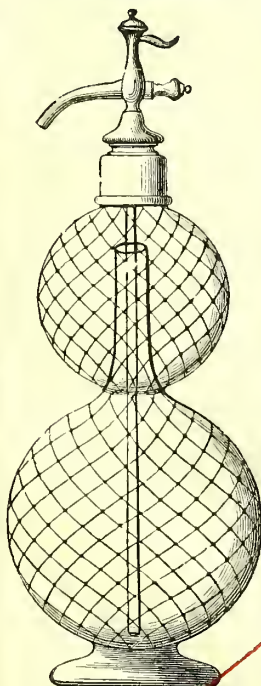
Sole Inventor and Proprietor of the Article and Name "SELTZOGENE."

THESSIER-FÈVRE, Son-in-Law, Manufacturer.**WHOLESALE PRICES.**

Celebrated D. Fèvre Seltzogene.	3 pint, wire covered		12s. 0d. each.	} Liberal discount allowed
	3 pint, cane covered		12s. 6d. "	
	5 pint, wire covered		18s. 0d. "	
	5 pint, cane covered		19s. 0d. "	
Case and Packing	3 pint, wire covered		30s. 0d. "	}
	12 Seltzogenes, 3 pint size		4s. 0d. net.	
	12 " 5 " "		5s. 8d. "	
Celebrated D. Fèvre Powders for the Seltzogenes.	6 " 8 " "		9s. 8d. "	}
	3 pint, per doz. boxes of 12 charges,		24s. 0d.	
	5 " " " "		36s. 0d.	
Pure Tartaric Acid and Bicarbonate of Soda in the highest state of perfection.	8 " " " "		60s. 0d.	} Liberal discount allowed.
	3 pint, per doz. boxes of 10 charges,		20s. 6d.	
	5 " " " "		30s. 6d.	
	8 " " " "		45s. 2d.	

EXTRA:—Taps, Tubes, Valves, Washers, &c.**DIRECTION FOR REPAIRS.****DRIP CATCHERS, FITTINGS, MEASURES, &c.**

ALL MY GOODS ARE TESTED.
ILLUSTRATED CATALOGUE FORWARDED FREE.



TRADE MARK.

D. Fèvre
REGISTERED.

WILCOCKS' IMPROVED "ORIGINAL" SODA WATER MACHINE

(HAND POWER),

To make 100 Dozen per Day of highly-charged Gaseous Water,

£22 : 10 : 0

This Machine is on the continuous-process Bramah principle, has a good size Lead Generator, Copper Gas Holder in oak tub, with internal pipes of block tin; Bramah principle Gun-metal Pump in a frame of iron, with Fly-wheel, Crank, and Handles. *Instead of the Gun-metal Cylinder or Condenser, with revolving Agitator and Toothed Gear-wheels, we substitute in this Machine a large Copper Con-enser of about four times the size, with our Apparatus fitted to the Copper Con-enser.* We find the Waters are more highly charged with Carbonic Acid Gas by this method than any other way of saturation, and they are perfectly free from metallic contamination. This Machine is also strongly recommended for filling Syphon Bottles, and, if driven by a Motor (either a Gas, Air, Steam, or Water) Engine, the product is about double.

Wilcocks' "Original" Soda Water Machine, to make 100 dozen per day by hand power, with Dial and Water Gauges, Lead Generator, and Copper Gasometer **£22 : 10 : 0**

Packed for Export in extra-strong Iron-bound Cross Battened Packing Case, **£3.**

"Middlesex" Lever Corking & Filling Machine, for Corked Bottles **£5 : 0 : 0**

Wilcocks' "Eclipse" Filling Machine, for filling the various *Patent* Internal Stopper Bottles **£4 : 10 : 0**

Wilcocks' Syphon Filling Machine, for filling Syphons **£4 : 10 : 0**

Packing Case for each Filling Machine, separately, **£1 5s. each.**

If all three in one Case, **£2.**

Printed Testimonials and Illustrated Price List on application.

N. G. WILCOCKS, BACK STREET, BATH.

EUGENE GERAUT & CO.



SELTZOGENES.

First introduced by EUGENE GERAUT & Co. in 1853.

3-pint Size, Wire, 13/0; Cane, 13/6
5-pint " " 18/0; " 19/0
8-pint " " 30/0; " 32/0

Strongly silver-plated top, 5/ each extra.

3-pint size, strongly silver-plated, richly decorated porcelain stands, 30/ each; 5-pint size, ditto, 38/ each; 8-pint size, ditto, ditto, 48/ each.

Our well-known Selzogenes are improved yearly, and have already stood a public test of upwards of Twenty Years, and are acknowledged as THE VERY BEST.

POWDERS FOR THE ABOVE: 3-pint, per dozen boxes, 22/; 5-pint, ditto, 36/; 8-pint, ditto, 65/.



SYPHONS.

Clear or coloured glass, pure ENGLISH BLOCK TIN TOPS, with piston or cap.

22 6

per dozen, for quantities of not less than one gross.

25/ per dozen, for less than one gross.

Packing in Cask, 5/ per gross.

The Name marked on the metals free of charge for quantities of not less than one gross.

The Name engraved with Trade Mark, from 1/6 to 2/6 per dozen extra.



LARGE DISCOUNT.

1 & 2 Corporation Buildings, Farringdon Road, London, E.C.

BOURNE WATER,
THE PUREST IN ENGLAND.

R. M. MILLS & CO.,
BOURNE, LINCOLNSHIRE,

Manufacture all kinds of AERATED WATERS from this Celebrated Artesian Spring.

DR. ANDERSON'S AERATED "TISSUE PHOSPHATE" TONIC WATER,

An Aerated Tonic Beverage, containing all the Mineral Aliments of Nutrition, and assisting Digestion in most marvellous degree.

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